TECHNOLOGY DEPARTMENT

LIBRARY

TELEPHONE ENGINEER and MANAGEMENT

OCTOBER, 1947

First of all, we'd like to join you in the chorus and sing the praises of all who were responsible for the huge success of the 50th annual U. S. I. T. A. Convention.
Then if you'll permit us, we'd like to voice a note of appreciation to the members of our staff and the R. R. Donnelly and Sons Company for the harmonious cooperation that made possible the successful production of our two "sunset-to-sunrise" editions of the Special Convention Directories.
We'll be looking forward to seeing you at the Convention again next year. Meanwhile if your present directory publishing procedure strikes any sour notes, our Service Representatives will be glad to explain the advantages of our complete directory publishing service to you.
GENERAL TELEPHONE DIRECTORY COMPANY
EASTERN OFFICE: 185 NORTH WABASH AVENUE, CHICAGO 1, ILLINOIS, TELEPHONE STATE 5478
WESTERN OFFICE: PRESS-TELEGRAM BUILDING, LONG BEACH 12, CALIFORNIA, TELEPHONE 6-7221

55 YEARS AGO THIS MONTH

DR. BELL OPENED UP THE FIRST LONG DISTANCE LINE BETWEEN NEW YORK AND CHICAGO

On October 18, 1892, Dr. Bell spoke over the first long distance line connecting America's two largest cities.

The New York - Chicago telephone line had been rushed to completion so that it would be ready for the Columbian Exposition at Chicago. It was ready on the scheduled date, even though the opening of the exposition was delayed until the following year. This was another striking example of telephone service in action. Prompt and efficient service is characteristic of telephone workers in every department. It is part of their tradition of faithfulness and dependability.

In Exide Batteries you will find the same dependability for which telephone service is famous throughout the world. Since 1895, Exide Batteries have been proving themselves worthy of that trust.

Exide
BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

IT SEEMS TO US

WALTER A. PIRNER, Delmont, S. Dak., secretary-treasurer of the South Dakota Te'ephone Association, is also mayor of his home town. The latter experience stands him well. His handling of the program and convention at Sioux Falls, Oct. 1 and 2 was outstanding for an officer with only a year in the saddle. The meeting was excellent and well attended.

* * *

Our thanks to KENNETH DALLEY of the Central Te'ephone Company, Sioux Falls, for his hospitality. KEN and LEONARD ROHDE kept the visitors busy with their thoughtful invitations. There was one story about a pair of blue pajamas that we are hazy about.

* * *

Thanks to the executives of the New York and Iowa associations, ALLYN W. RYDER and WM. F. MILLER respectively, for their remarks on our September editorial "Boom Growth". Although the contents of our publications are copyrighted we are always pleased to have associations use our contents and extend permission for them to do so.

* * *

Leich Sales DE WITT (GIBBY) GIBSON recently showed us a new type of telephone wire molding designed and patented by two Lincoln (Nebr.) Tel. & Tel. Co. men, Alex Geist and Rex Winter. It is a "new" product and looked very good. We will have description later.

* * *

The flyingest man we know—LLOYD SPENCER landed in Rochester, N. Y., on October 2, completing a four weeks sales trip through the states and in his words "I covered 9,000 miles and didn't put a foot on a train." Maybe if a plane had been available he would have considered playing golf at his party the next afternoon.

* * *

Phootball Phan—GEORGE MORSE, the Reliable Electric man, was seen rushing to the exit of the LaSalle St. Station the other Saturday morning and upon questioning as to why the hurry, George said "Gotta get home and beat it out to Evanston to see Northwestern take UCLA."

The National Telephone Magazine

TELEPHONE ENGINEER and MANAGEMENT

OCTOBER 1947 **VOL. 51, NUMBER 10**

Editor, RAY W. SMITH • *Advertising Director*, ROY F. SMITH
Managing Editor, JOHN G. REYNOLDS • *Associate Editor*, JAY G. MITCHELL
Washington Bureau, ROLAND C. DAVIES and FRED HENCK
Promotion Manager, DON C. SORENSON • *Production Manager*, MARGARET INDIA
Circulation Manager, BERNADINE STEPHENS

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COVER: Group photo taken during 1907 convention of Nebraska Independents. (Photo courtesy of Lincoln (Neb.) T. & T. Co.)

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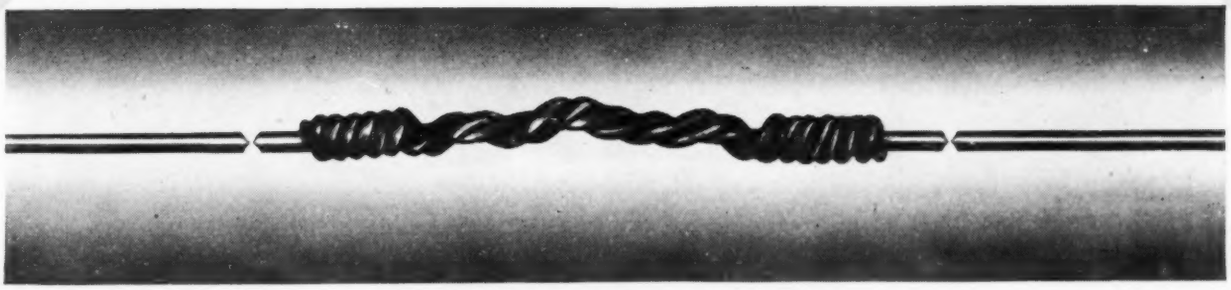
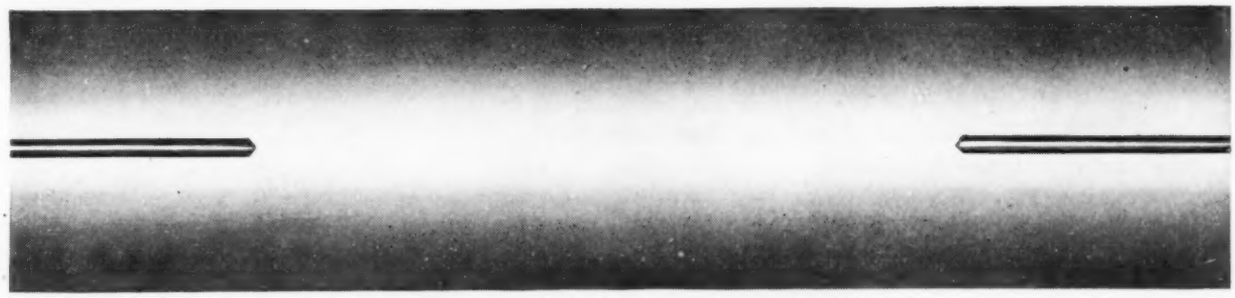
Nicopress

REPAIR SLEEVES

eliminate the need of using a section of wire and two sleeves when old defective splices are being replaced.



DEFECTIVE SPLICE



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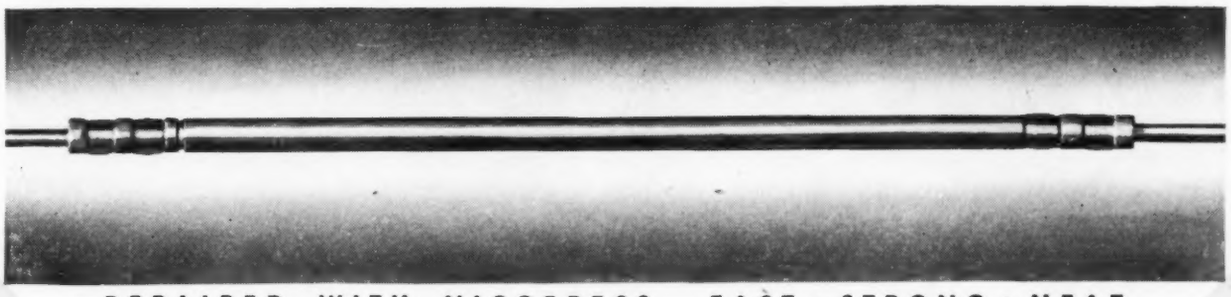

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The War Assets Administration is now offering a $900,000 inventory of valuable surplus communication equipment at bargain prices. This large stock includes wire, cable assemblies, cords, headsets, sleeves, switchboards, telephones, terminals, test equipment, and many other desirable items. Some of it used, some of it unused—***all*** of this equipment was built to rigid government inspection and has proved its high quality and dependability. WAA offers part of this government-owned surplus at ***fixed prices*** and part on ***sealed bid:***

(a) More than $500,000 worth of this equipment, previously offered at fixed prices to priority claimants, is now offered on sealed bid basis to ***all*** levels of trade. Bids will be received up to 5:00 P.M., ***November 10, 1947.***

(b) The remainder of this inventory is being sold at fixed prices to priority claimants and commercial buyers on the following dates:

Federal Agencies	Oct. 20, 21, 22
Veterans of World War II	Oct. 23, 24, 27, 28, 29
Federal Works Agency	Oct. 30
Reconstruction Finance Corp.	Oct. 31
State and Local Governments	Nov. 3
Non-Profit Institutions	Nov. 4
Commercial, Industrial Buyers and Exporters	Nov. 5, 6, 7, 10, 12, 13, 14, 17

All of this equipment is completely catalogued in "Listing NYL-97-6518," dated **Oct. 20, 1947.** Write, 'phone, or visit any WAA Customer Service Center for ***your*** copy. It explains in detail the location and condition of this material, and how to inspect and order it. Official forms are also included for the submission of orders or bids.

All sales are subject to the Standard Terms and Conditions of Sale of the War Assets Administration shown in this catalog. The right is reserved to reject any or all orders or bids.

Remember . . .

Get your copy of "Listing NYL-97-6518" first!

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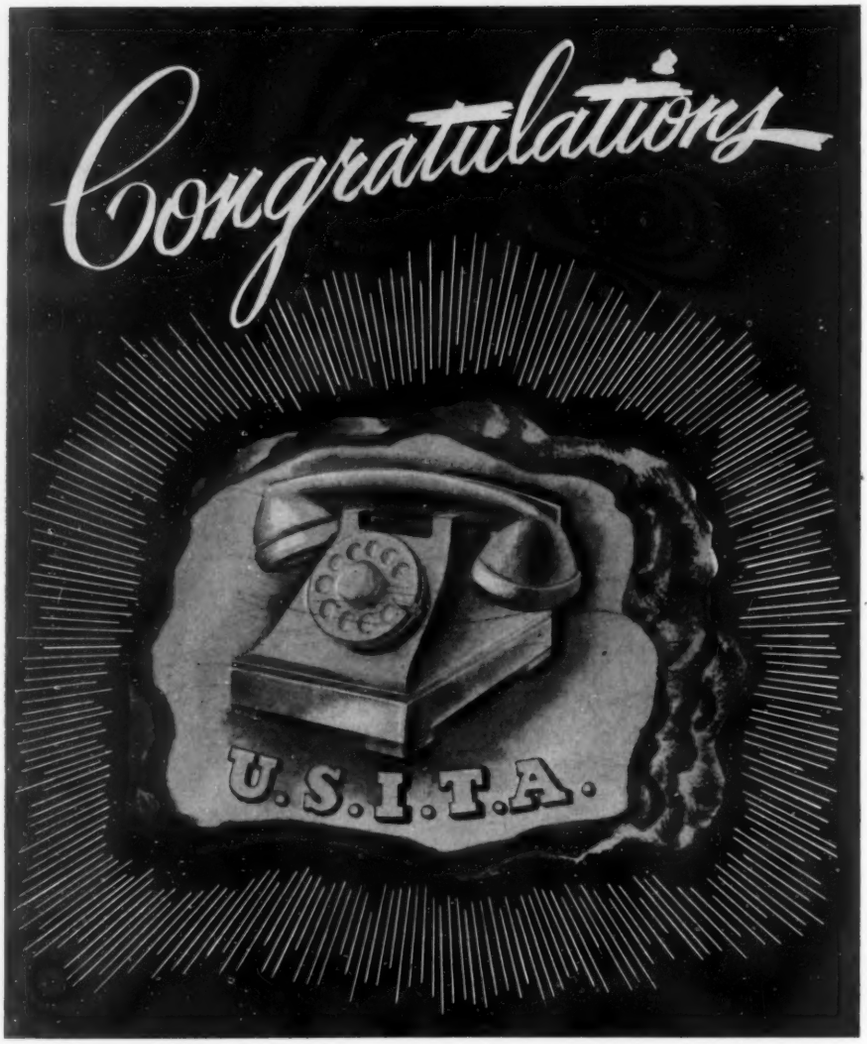


Congratulations to the United States Independent Telephone Association on fifty years of service given to America. When a group bands together in the interests of the public, with the aim of reducing operating costs and increasing service to the individual customer, they have earned universal gratitude. When they succeed in these aims over a period of fifty years they deserve something more than mere congratulations.

Hubbard and Company became interested in Pole Line Hardware at approximately the same time that U.S.I.T.A. was starting to grow and our interest in communications has paralleled that of U.S.I.T.A. with the added application of manufacturing experience since 1843.

Again, our congratulations to U.S.I.T.A. on its Golden Anniversary.

HANG THE LOAD ON HUBBARD HARDWARE

HUBBARD AND COMPANY

Established 1843

PITTSBURGH · CHICAGO · OAKLAND

Dear Ray:

We read with a great deal of interest the editorial in the September issue of FORTNIGHTLY TELEPHONE ENGINEER entitled "Rates Rates Rates".

We believe this editorial should be distributed to our member companies. With this in mind, we are wondering if you would permit us to have a photo offset made of this editorial so that it could be mailed to the Independent Companies in New York State. We, of course, will make adequate mention that it is an editorial appearing in your magazine.

Hope to hear from you at your convenience.

Very truly yours,
ALLAN RYDER,
Executive Secretary
New York State
Telephone Assoc'n.

Thanks for your request Allan. We hope the editorial will be of much value to your association.—Ed.

* * *

Gentlemen:

Please keep my copies of TELEPHONE ENGINEER and MANAGEMENT coming. I can truthfully say that I receive very much good information from your magazine. It has given me many good pointers.

Our local blacksmith and myself built a small ditching machine for cable work. It makes a ditch 3" wide and up to 3 ft. deep. If you would be interested I could send you some pictures of it. Some improvements are still necessary for more efficient opration.

Yours truly,
Kenneth H. Johnson,
Kirow, Iowa.

Let's have the inside information on the ditching machine.—Ed.

* * *

Dear Sirs:

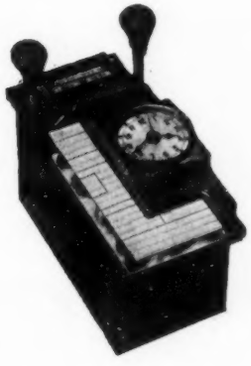
I am enclosing a check for two dollars, ($2.00) to cover the cost of a year's subscription of your monthly publication.

Please send it to Mr. Wm. H. Ferguson, 49 Montrose St., Newark 6, New Jersey.

He has recently been employed by the N. J. Bell Telephone Co. and has read copies of the magazine from his fellow workers. Since he has often mentioned it, I thought it would be nice to have for him to read monthly, and to have it delivered in his name.

Yours very truly,
(Mrs.) Lenora M. Ferguson

Dependable



CALCULAGRAPH has met the test of extraordinary circumstances; and thus, it remains the ensign for registering the starting and elapsed time for toll calls.

CALCULAGRAPH COMPANY

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STRETCHES WIRE-HOISTS, PULLS... ideal for line construction or repairs... Capacity ¾ Ton

WEIGHS ONLY 6 POUNDS

Saves enough Time and Manpower to pay for itself many times

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each **$14.75** F.O.B. Chicago

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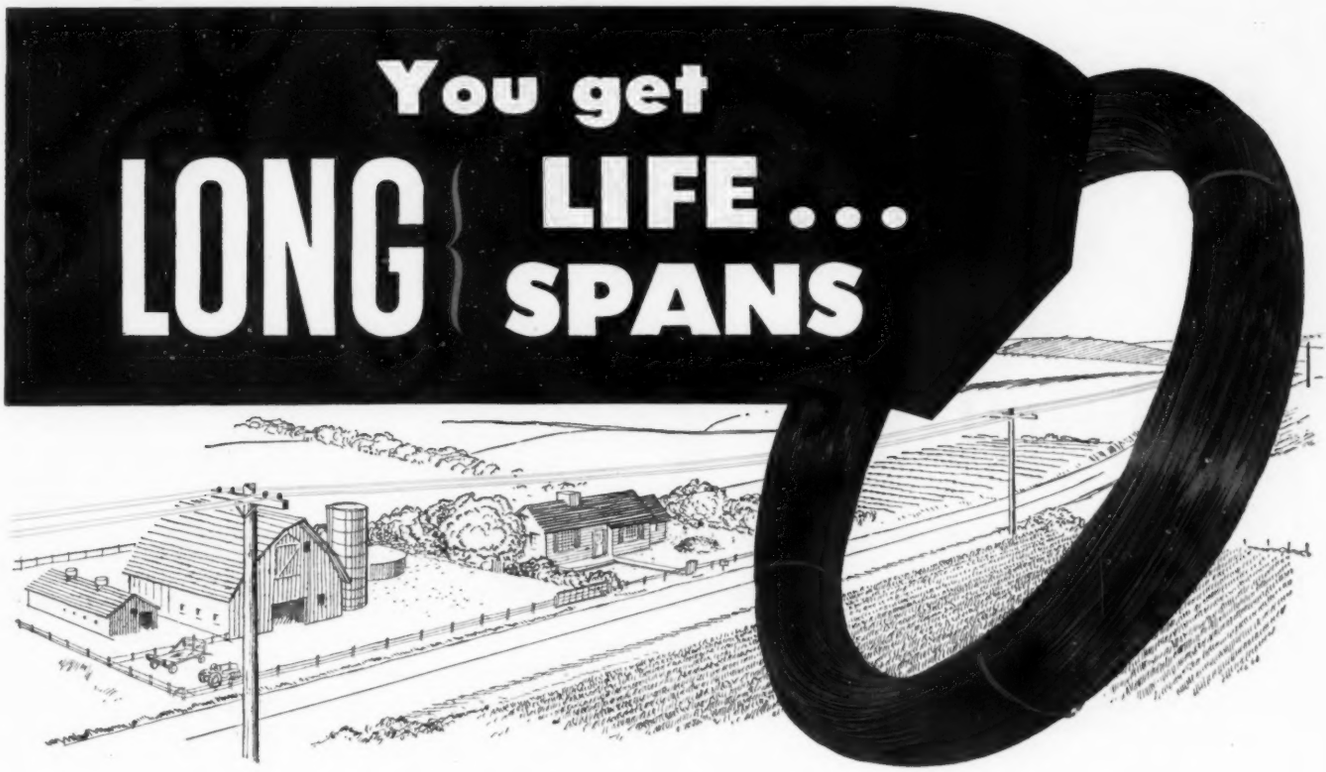

...when it's *Copperweld Line Wire*

With its long-lasting qualities, Copperweld Line Wire definitely meets the requirements of today's trend toward low-cost, reliable, long-span construction. Made by molten-welding a thick, protective covering of copper to an alloy steel core, Copperweld combines the electrical and mechanical properties of these two metals and provides a conductor having advantages which are not obtained in any other line wire:

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6. **Ease of handling because of its pliability**
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Simple in design and easy to apply. This high-strength tie assures uniformity in construction. It eliminates the more common faults of hand-wrapped ties, which have resulted in chafing and fatigue fracturing of conductors. Available for line wire sizes No. 12 AWG to No. 4 AWG.

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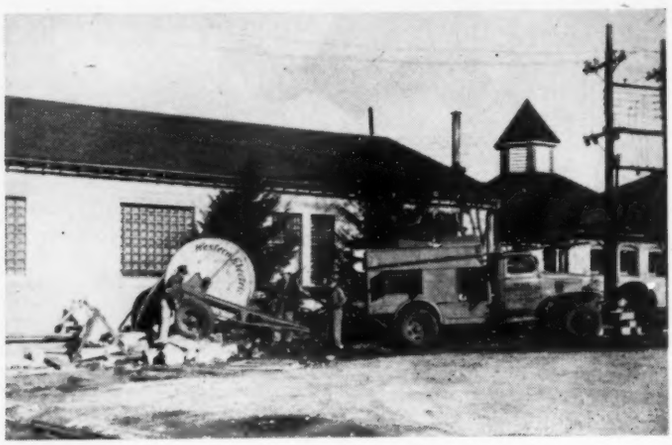

For several years now many wise Telephone Companies have been letting contracts to construction specialists rather than keeping on an extra large staff for doing the work themselves.

We offer you the best. A letter or card will bring full information.

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COILED SPECIAL

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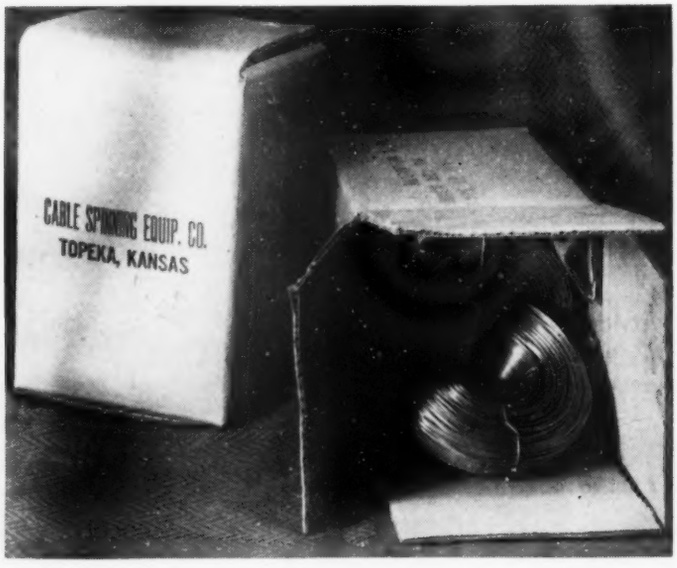
Can Ship the Types Listed Below From Stock



#11A, .061 Type 430 Stainless Steel corrosion resisting under all conditions. Used with steel strand.

7A, .091 aluminum alloy wire, very high corrosive resisting. Nice to work with. Used with steel strand.

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FOR *53* YEARS

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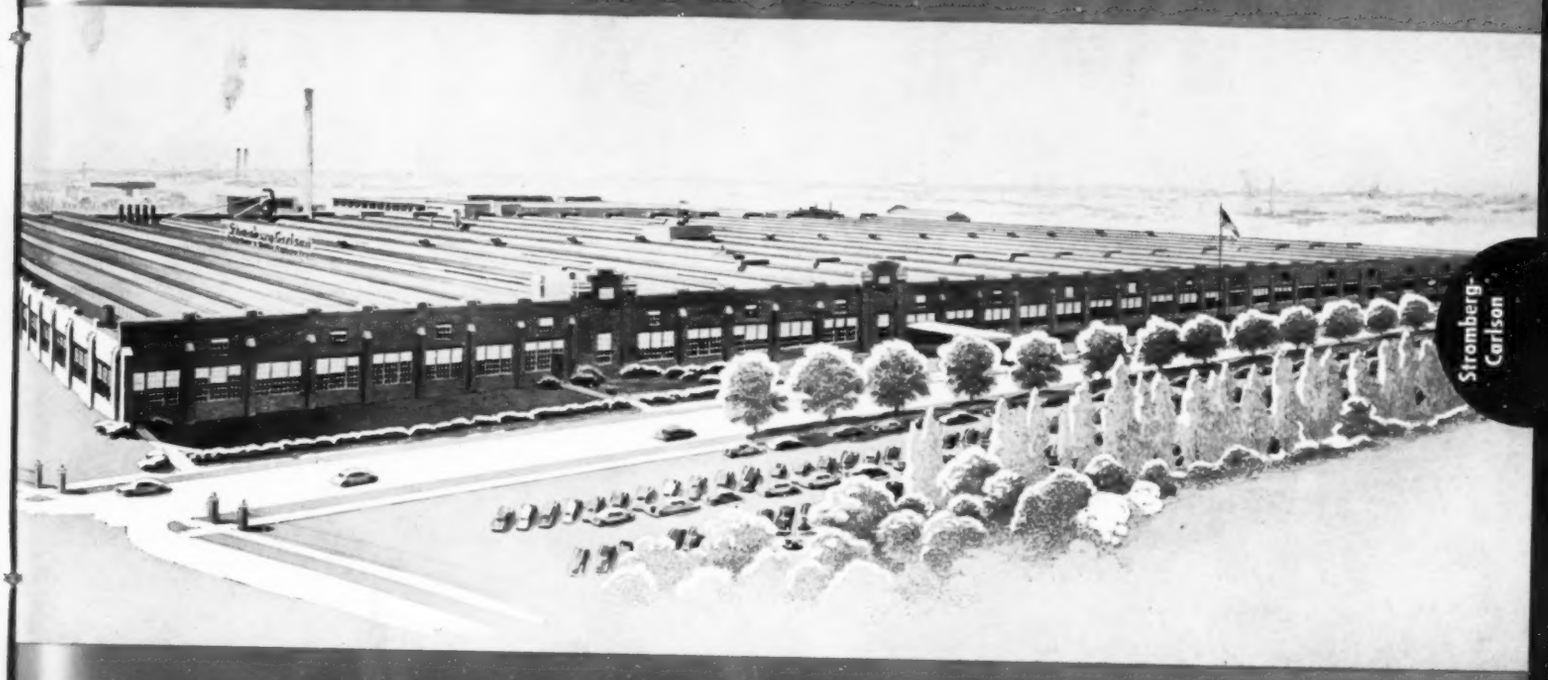

Stromberg-Carlson

"Nothing Finer than a Stromberg-Carlson"

From the days when telephony was limited by room-to-room circuits, to the present era when it girdles the globe, Stromberg-Carlson research and development have been constantly in the vanguard of telephone progress.

"THERE IS NOTHING FINER T

BEAUTY AND PERFORMANCE GO HAND IN HAND

Purchasers who have been buying Stromberg-Carlson Telephones for half a century, or more, know this about them: They progress continually toward perfection!

Every discovery or advance which can benefit their superior quality, their simplified construction, or their outstanding performance is incorporated as soon as exhaustive field testing has proved its value.

Externally, their grace of outline, their modeling and their finish vie with the best in modern design.

Constant leadership in telephone instruments is still further evidence that "There is Nothing Finer than a Stromberg-Carlson."

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Proved and Improved

...STROMBERG-CARLSON TELEPHONES

All Stromberg-Carlson telephones have black Vinylite wrinkle finish cords. New black phenol base and black phenol handset blend in harmonizing design with the 1943 telephone.

New ringer design incorporates Alnico II magnets which greatly improve the efficiency of the ringer and allows the instrument to be used on long loops.

Reduced side-tone is obtained by use of a new induction coil and coil retractor assembly. The new coil unit which can be used for all services on all types of phones.

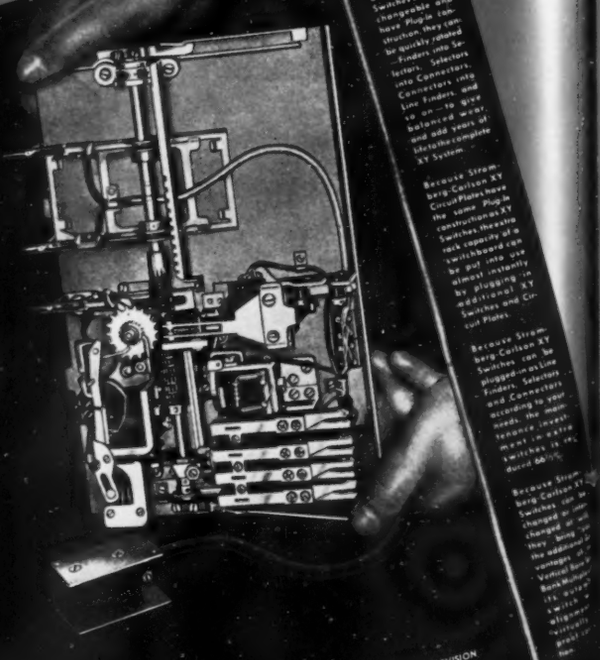
Already noted for its outstanding performance efficiency, the new Stromberg-Carlson transmitter, through improved design, is even clearer and handsomer than ever.

The Stromberg-Carlson dial is precision-built for years of smooth, fast, quiet operation. Non-glare finger-wheel. Durable fingerplate. Plastic dust-cover protects mechanism.

A simple mechanical adjustment provides two-way hook-switch operation. Subscriber, by removing handset, can tell if line is in use without disconnecting transmitter.

TELEPHONES, SWITCHBOARDS AND INTERCOMMUNICATION SYSTEMS • SOUND EQUIPMENT AND INDUSTRIAL SYSTEMS • RADIOS, RADIO-PHONOGRAPHS, FM AND TELEVISION

THE XY SWITCH . . . HEART OF THE STROMBERG-CARLSON XY SYSTEM



Since the universal Stromberg-Carlson XY Switch serves, interchangeably as a Line Finder, a Selector and a Connector, it is truly the heart of the Stromberg-Carlson XY System — a single unit whose triple application produces instantly recognizable economies.

The XY Switch is built with watch-like precision for fast, efficient operation and long life. Smaller and lighter than any other switch of its type, it reduces both the bulk and weight of complete switching equipment . . . permits smaller, less expensive exchange construction. Servicing time and costs are lower, too, since every XY Switch is instantly interchangeable.

Contact your Stromberg-Carlson representative today for complete details.

PLUG-IN Flexibility

Because Stromberg-Carlson XY Switches are entirely interchangeable and have Plug-in construction they can be quickly rotated — Finders into Selectors, Selectors into Connectors, Connectors into Line Finders, and so on — and give balanced wear and add years of life to the complete XY System.

Because Stromberg-Carlson XY Circuit Plates have the same Plug-in construction, XY Switches threaten capacity of a switchboard can be put into use almost instantly by plugging in additional XY Switches and Circuit Plates.

Because Stromberg-Carlson XY Switches can be plugged — as Line Finders, Selectors and Connectors according to your needs, the maintenance requirements are extremely low. A switch is removed in seconds.

Because Stromberg-Carlson XY Switches can be changed or interchanged as they become necessary, the subscriber's advantages of Vertical Selection and Panel Switching [illegible] its quiet operation, [illegible] positive [illegible]

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XY MEETS THE DIAL NEEDS OF EVERY SIZE COMMUNITY... TODAY AND TOMORROW

THAN A STROMBERG-CARLSON"

YOU ASKED FOR THEM... AND HERE THEY ARE

...every magneto feature you have ever wanted!

THE new STROMBERG-CARLSON MAGNETO TELEPHONES

In appearance, efficiency, adaptability and long life, the new Stromberg-Carlson Magneto Telephones offer everything you would expect from one of the industry's oldest, most experienced companies.

Modern styling meets with instant subscriber approval.

Base assemblies for the three instruments are interchangeable for service economy.

High-powered, compact Alnico 5 generator reduces bulk, permits streamlined design.

For details of these and many other quality features that must be seen to be appreciated, contact your Stromberg-Carlson representative.

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STROMBERG Telephones CARLSON

No. 1248—compact, streamlined, complete, "All-in-one" modern desk set.

(Open view) Interchangeable base illustrates compactness of internal design. Push-buttons for grounded ringing, illustrated on desk set and wall instrument, are optional equipment. Telephones are easily converted for common battery or dial use.

No. 1268—desk set harmonizes in appearance with telephone instruments.

No. 1258—attractive cradle-type wall telephone in gleaming black plastic case.

TELEPHONES, SWITCHBOARDS AND INTERCOMMUNICATION SYSTEMS • SOUND EQUIPMENT AND INDUSTRIAL SYSTEMS • RADIOS, RADIO-PHONOGRAPHS AND TELEVISION

THE STROMBERG-CARLSON DIAL...

It embodies a precision and fine adjustment comparable to that of a costly timepiece.

It is built to withstand thousands of operations by scores of different hands daily throughout the years.

It evidences its quality by the attractiveness of its appearance, by the choice, the forming, the treatment, and even the careful finishing of its materials.

It is proof of the fact that no matter what the telephone product, "There is Nothing Finer than a Stromberg-Carlson."

STROMBERG-CARLSON

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STROMBERG Telephones CARLSON

TELEPHONES, SWITCHBOARDS AND INTERCOMMUNICATION SYSTEMS • SOUND EQUIPMENT AND INDUSTRIAL SYSTEMS • RADIOS, RADIO-PHONOGRAPHS AND TELEVISION

REMEMBER.. IT'S WHAT'S BEHIND THE FACE THAT COUNTS

STROMBERG Telephone CARLSON

Doylestown's new Stromberg-Carlson RELAYDIAL gets electronic circuit test

Housed in the modern brick and glass building recently erected by the Doylestown Telephone Company, the new Stromberg-Carlson RELAYDIAL will give modern service to a steadily growing residential community located 12 miles from Akron, Ohio . . . will be a path of dial-tone's tell-content now being converted to inter-toll dialing.

With an ultimate capacity of 200 lines, and with 130 now equipped, this new Stromberg-Carlson RELAYDIAL is getting its final electronic tests preparatory to shipment and installation at Doylestown, Ohio.

Main reason for its unusual size and elaborateness is that it is designed and equipped for nation-wide operator-toll dialing. Under such a set-up, every incoming toll call always has its path or circuit to the subscriber's telephone line.

The electronic equipment used in testing was designed and built by Stromberg-Carlson for the purpose of eliminating human errors.

It automatically dials through every connection from each telephone to every other telephone . . . tests all features of the RELAYDIAL system . . . and locates any trouble that may exist. It is one more example of the thoroughness in building telephone equipment that warrants the slogan, "There is Nothing Finer than a Stromberg-Carlson."

STROMBERG-CARLSON

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Q. How can you dig 20″ holes 7′ deep in less than 2 minutes in hard ground?

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TELEPHONE ENGINEER

Fortnightly TELEPHONE ENGINEER ★ TELEPHONE ENGINEER AND *Management*

ON THE 1st OF EACH MONTH ON THE 15th OF EACH MONTH

NEWSLETTERS *on Alternate Weeks*

October 15, 1947

Dear Sir:

Wisconsin State Federation of Labor dropped 50-year plank advocating public ownership of utilities; reason, according to newspaper report, is that "actual bargaining experience has led the chiefs of some of the larger unions to the conclusion that labor can get more generous contracts from private employers and corporations than from government agencies."

Labor leaders should also have learned, from simple observation of affairs abroad, that government ownership of industry means death of free labor movement. No one can strike against government. No one can challenge decisions of government. There can be no redress from injustice when all-powerful officials dominate labor's source of livelihood.

Worst of all, when government takes over business, it is almost impossible to get government out of business. A revolution or complete collapse of government in power is necessary. Even then, transition back to free enterprise system is difficult & costly. Wisconsin State Federation of Labor has learned that free labor & free enterprise are one.

* * *

Hearings on overall revamping of Fair Labor Standards Act scheduled to start Mon., Oct. 20. Sessions will be thrown open for testimony from all sides; will cover all phases of wage-hour law where there is controversy. It is reliably understood that Republican Congressional majority is planning to use boost in minimum wages to counter party criticism that it was anti-labor in passing Taft-Hartley Act.

* * *

Viewed as particularly important in broadband transmission hookups & microwave radio relay systems, radically new communications technique for long distance telephone transmission—Pulse Code Modulation—was given its first public demonstration recently by engineers of Bell Telephone Laboratories before several hundred members of New York Section of Institute of Radio Engineers. Revolutionary new vacuum tube, which electronically converts human voice into various patterns or codes of electrical impulses & which, through its 96 channels, will handle code signals at incredible speed of 5,376,000 pulses per second, was also displayed for first time at meeting. New Pulse Code Modulation is considered entirely different from earlier forms of Pulse Modulation; according to Bell Laboratories scientists, promises marked freedom from noise & interference.

* * *

Problem of high replacement costs of plants & plant equipment deserves wider attention from all telephone companies & tax authorities.

Recent issue of Guaranty Survey urges that sufficient funds—whether labelled depreciation or some other name—be withheld systematically from distribution as dividends to meet present and estimated future replacements at existing prices. At same time, it advocated that federal tax authorities modify revenue laws to encourage rather than restrain setting aside of adequate funds for depreciation purposes.

It is clear, Survey stated, that company which follows traditional accounting procedure of carrying its capital assets on its books at their cost value, distributing depreciation charges based on that value over estimated life of assets, & regarding its net earnings, thus calculated, as available for distribution to owners, is likely to find itself without sufficient means to replace assets at end of their useful life.

* * *

American Assn. of State Highway Engnrs. have formed five-member technical advisory committee on allocations, equipment standards, & cost comparison between use of telephone company radiotelephone facilities & systems established by highway departments. At recent annual meeting, cost comparison between telephone-owned & highway department-owned radiotelephone facilities was given by A. Earl Wood of Connecticut State Highway Department. He reported that for immediate operation of these facilities use of telephone-company radiotelephone stations and system would be cheaper for highway department.

* * *

FCC's general mobile hearings, which were to begin Oct. 27, have again been postponed. Sessions now slated to start Nov. 24. Meanwhile, deadline for filing requests for appearance also has been extended until Nov. 1.

* * *

Reduction of Federal excise taxes "as soon as practicable" was one of five items of tax revision advocated by recent joint conference of 30 Congressmen and state governors in Chicago. Conference stated unprecedented high total tax bill now being paid by American taxpayer to support all levels of government requires immediate readjustment of the Federal-State tax relationship.

* * *

Highlights: Sorum Tel. Co., Bison, S. D., issuing stock to cover repair program....Missouri Valley Tel. Co., Perry, Mo., recently incorporated with 600 shares of capital stock....Commonwealth Tel. Co., has emergency lung motor available for residents of Eagle River, Wis.; several company employers have been trained to use motor.... Interstate Tel. Co., Spokane, Wash., has automatic service projects scheduled for Wallace & Osburn, Idaho.

Indiana Tel. Assn. scheduled 15 meetings for Oct. & Nov.; Indiana Public Service Commission has provided its senior engnr. - Wm. E. Rody - to present program to each meeting.

Ray Smith

Ray W. Smith, Editor

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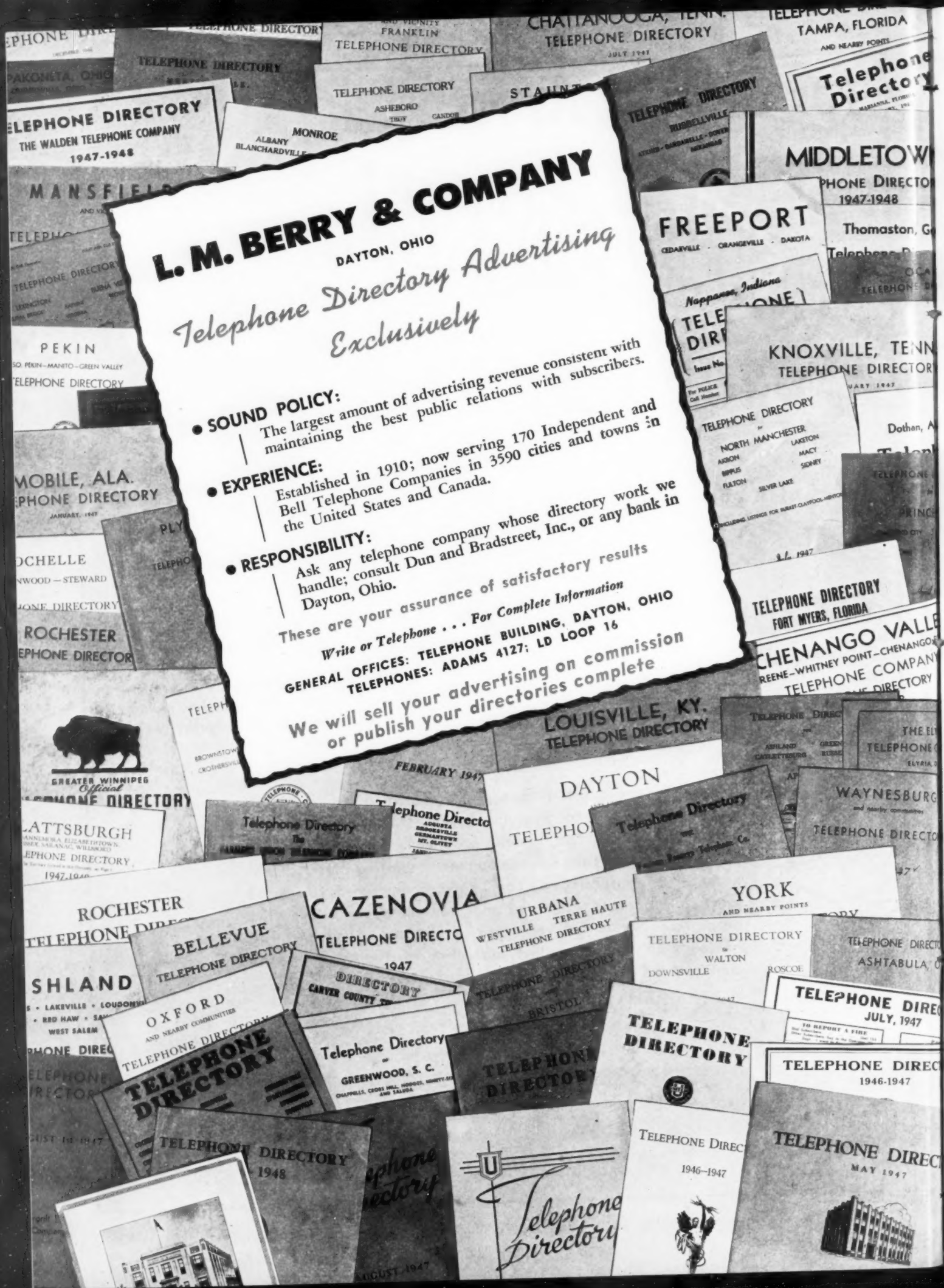
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1897 — *1947* — 1997

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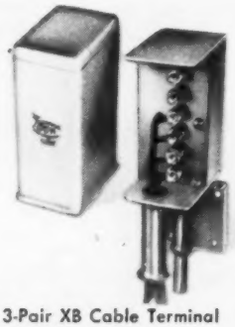
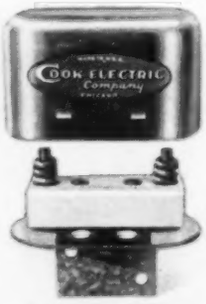
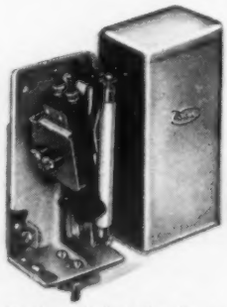
Looks Forward



3-Pair XB Cable Terminal



Testerm Drop Wire Connector



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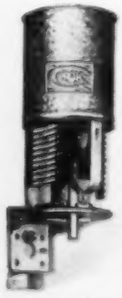

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A long line of Cook-engineered products have become recognized standards of quality and service throughout the world. Thousands upon thousands of dependable S-6 protected cable terminals have been in use for ten to twenty years. The Type 3800 Central Office Protector first met the need of an expanding industry for ⅜ inch center protection to allow more terminal pairs per foot of length. The Trans Mount System, developed by Cook just before the war, gives the rural exchange every form of protection with complete interchangeability of parts at low first and even lower upkeep cost. Today, two new Cook products, the 3-Pair XB Cable Terminal and the Testerm Drop Wire Connector carry on our tradition of leadership.

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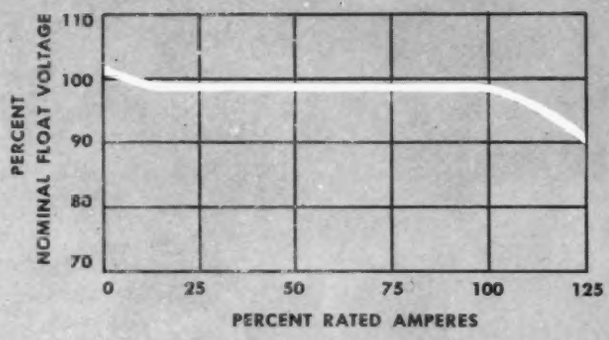
how constant voltage increases battery life



Typical Voltage Regulation Curve of the E. P. Diverter-Pole Motor-Generator

Operating records of many exchanges show that the E. P. Diverter-Pole Battery Charger increases battery life from six to fourteen years. Its steady voltage eliminates the dangers of both *low* and *high* voltages. Batteries are maintained at their correct charge under a full floating system, to fully protect exchange requirements. High battery temperatures, excessive gassing, and undue breaking down of the active cell material are prevented to assure the longest possible battery life. Keeping a battery in a fully-charged condition at all times means that it is ready to furnish power at peak current demands beyond the capacity of the charger, and that it stands ready to provide emergency power in case of an interruption of the commercial power supply.

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The main reason for this superiority is that The Electric Products Company is a specialty manufacturer. For every exchange battery-charging application, E. P. designs and builds an individual Motor-Generator that fits exactly the requirements of the particular operation.

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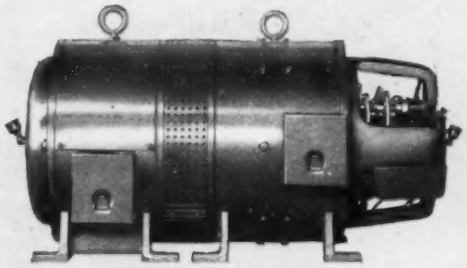

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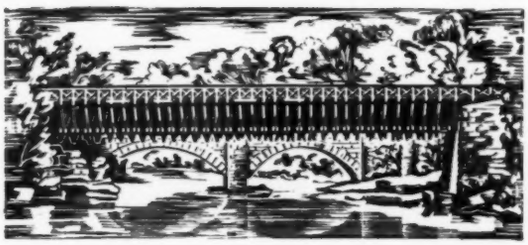

IN 1844, three years before Alexander Graham Bell was born, and long before the first Prairie-Schooner crossed the Mississippi River, John August Roebling's confidence in the suspension principle of construction so impressed the engineers of the State of Pennsylvania, that they authorized him to build the world's first suspension aqueduct.

How much is his confidence worth to all the thousands of engineers who followed and to humanity in general that have benefited from his pioneering venture?

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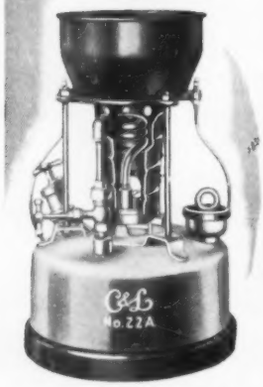

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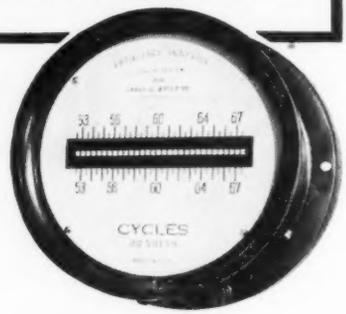

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and to talk over old times and new ideas.

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EDITORIAL

The Second 50 Years

"THE TUMULT and the shouting dies." The 50th anniversary of the organization of a national Independent telephone association has been fittingly celebrated at the Golden Jubilee Convention of United States Independent Telephone Association. This convention reached new heights in a number of ways. It was fitting and proper that it do so; the occasion justified the celebration.

Now, all that having been done, the Independent segment of the telephone industry faces the problems of its second 50 years.

There are now, and there will always be, problems for the industry to face and solve. The more progress the industry makes, the more problems it will have—progress always creates new questions and new problems to be solved.

A number of difficult situations are ahead of the Independent telephone industry, or important parts of it, right now:

Literally hundreds of small, locally-owned Independent exchanges face trouble, financial and otherwise, unless they get their exchange rates up to a level more in keeping with present-day prices and costs of everything they buy and use in supplying telephone service.

In many such cases increases of rates must be accompanied by improvement in the service. In many cases, also, by extension of plants. This means new construction, for expansion or rehabilitation or both. This, in turn, means that additional money must be put into the business.

The new investment required now, for adding a telephone, is considerably more than it has ever been before. The cost of supplying service to and of maintaining that telephone is also greater.

The only successful answer to this situation is exchange rates compatible with present costs, and a quality of service for which the public will be willing to pay those higher rates.

The telephone industry faces another important problem—that of boom growth. Never before, in the history of the industry, has the public demanded so much telephone service, both toll and local.

How much of this demand springs from these boom times of unprecedentedly high employment at high wages, no one can know. But we think it can be considered a certainty that if there should be a setback in the present high rate of employment, many of the telephones recently installed and now being installed would be promptly ordered out.

The nature of the telephone business requires that the telephone company make all the investment for the installation of a telephone, and take all the risk of the service being relinquished before the investment has been justified.

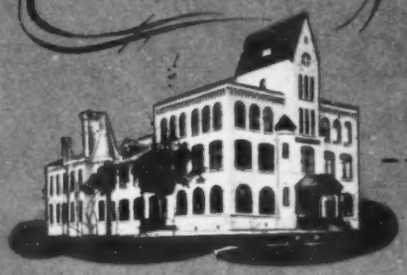
This can turn out to be a dangerous situation to many telephone companies unless some species of selectivity can be and is used in meeting this boom demand.

These and other problems confront the Independent telephone industry as it starts its second 50 years of organized activity through its national association.

The status of the Independent industry will be determined, 50 years from now, by the success with which it has recognized and has met the problems that confront it during that time.

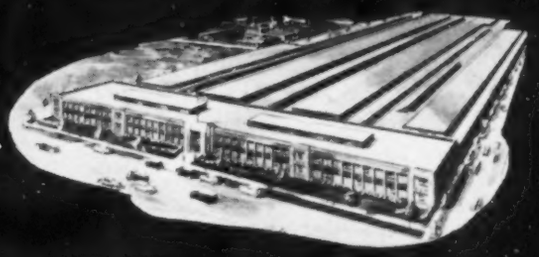
The telephone associations, national and state, can be of great service to Independent telephony by recognizing the problems of the industry as they arise, and by putting organized effort behind the solution of them.

1897



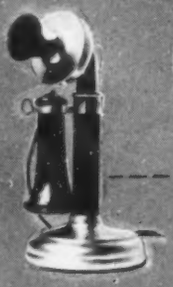
First factory, former school building, Highland Park, Ill.

1947

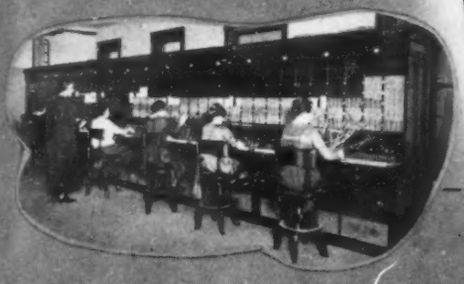


Present modern factory and office, Chicago, Ill.

plant and products have changed . . .



Early Kellogg Telephone



Early Kellogg Manual Switchboard

KELLOGG

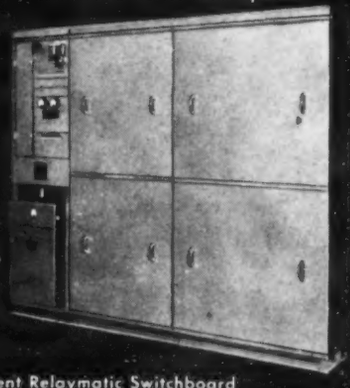
1897 1947

Semi CENTENNIAL

Fifty Years OF SERVICE AND PROGRESS

KELLOGG SWITCHBOARD AND SUPPLY COMPANY

Present 1000 Series Masterphone



Present Relaymatic Switchboard

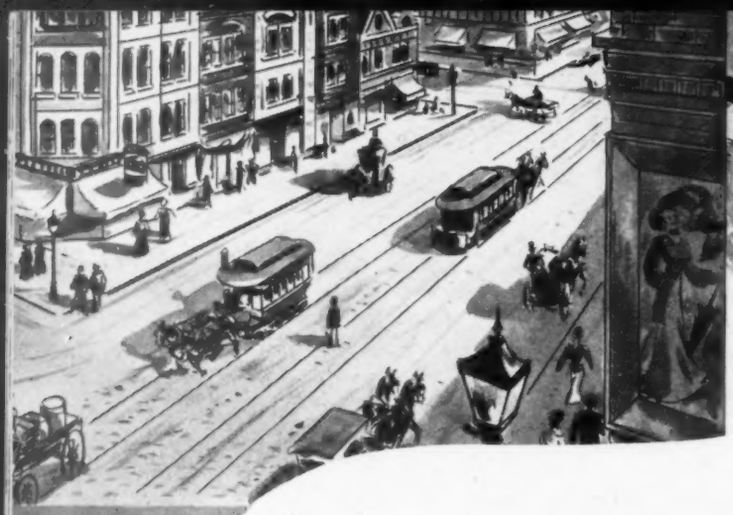
but the policy never

Milo G. Kellogg, founder and first president

"Fifty years of service and progress" says our golden anniversary seal. They have been years of change—revolutionary change—as far as production facilities and products are concerned . . . fifty years of supplying the finest equipment engineering skill and foresight could produce.

But the basic policy on which the company was founded has remained unchanged: To champion the cause of Independent telephony . . . to further the interests of Independent telephone men . . . to develop and manufacture equipment . . . to make the operation of telephone exchanges a profitable and satisfying pursuit.

James H. Kellogg, grandson of the founder, present president



THE YEARS BETWEEN . . .

Your Fifty Years

1897
Independent telephone men hail founding of Kellogg company by Milo G. Kellogg, one of the foremost telephone equipment designers of the day.

1898
Newly founded company builds largest manual board ever built up to that time for St. Louis, Mo.

1899
Growing demand of Independents for Kellogg products necessitates moving to factory in Chicago.

1903
Independent industry acclaims Kellogg's introduction of "four-frequency" harmonic telephone system.

1905
First American-made cradle-type telephone, now the most popular, introduced by Kellogg.

1913
Kellogg, first to introduce Bakelite in telephone manufacturing, installs one of the first Bakelite molding plants in the country.

1914
Kellogg originates feature switchboard with line lamp recall, machine ringing, keyless listening, instantaneous disconnect, dark key-shelf and other features.

1915
Kellogg introduces straightforward trunking, one of telephony's greatest developments . . . Kellogg moves to larger factory.

1929
Kellogg introduces Bronze Drop Wire to Independent industry.

1930
Kellogg introduces first Masterphone.

1931
Patented "Masterbuilt" switchboard introduced by Kellogg.

1933
First non-positional transmitter introduced by Kellogg . . . "Triad" (anti-side-tone) circuit introduced.

1935
Kellogg introduces 925 Series Masterphone with all working parts housed in one base.

1937
"Relaymatic" line of dial-operated switchboards introduced.

1938
Kellogg moves to new modern plant.

1939
Kellogg develops new standard for PBX equipment.

1945
Kellogg announces world's most modern telephone, the 1000 Series Masterphone.

1946
Kellogg pioneers the use of mobile radio-telephone systems among Independent telephone companies . . . Introduces short-haul single-channel carrier circuit.

1947
Kellogg introduces the improved "Relaymatic" Switchboard . . . Completes its first half-century of service to Independent telephony.

We Salute U.S.I.T.A. on Your 50 Years, Too

The Kellogg Company originated out of the desire to help the struggling but vigorous Independent telephone industry. Another group, with similar aims, had its start in the same year, 1897. This was the association which became the United States Independent Telephone Association. As one fifty-year-old to another we say: "Best wishes for continued success."

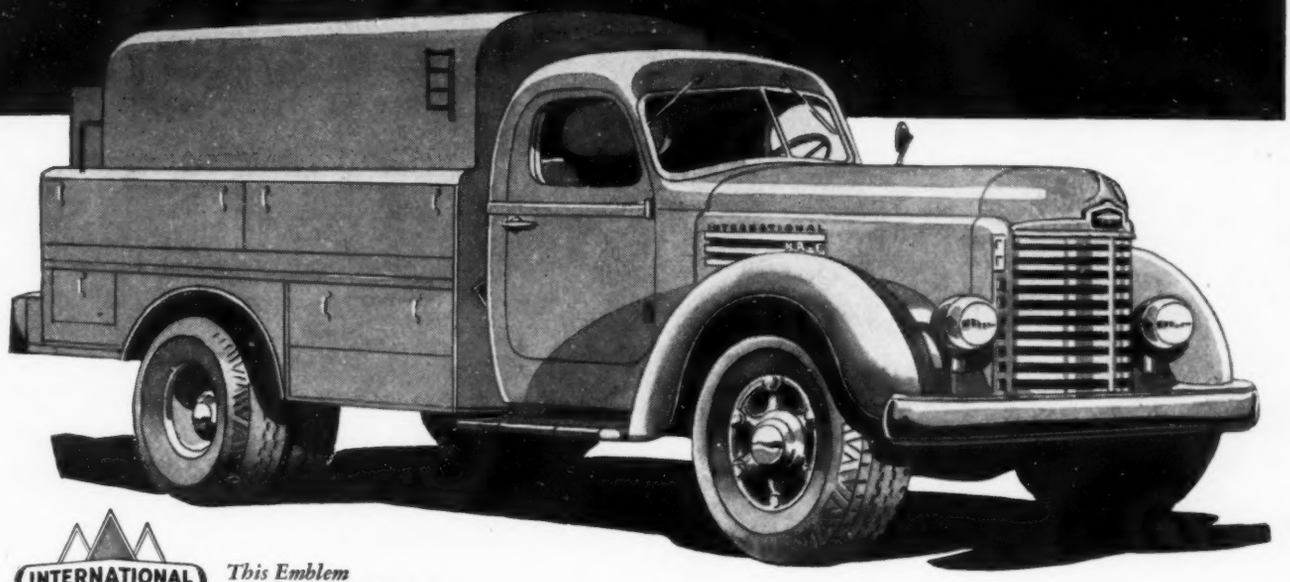
A PLEDGE TO OUR CUSTOMERS

A glance through the list of Kellogg highlights listed above leads to this inescapable conclusion: Kellogg's first fifty years have been YOUR fifty years. Only because these developments benefitted you, only because they did a job you needed done, could we have continued to merit your confidence.

Now, at the start of our second half-century, you can confidently expect the same pioneering, the same spirit of service and cooperation that characterized our first 50 years.

KELLOGG SWITCHBOARD & SUPPLY COMPANY • • Chicago, Illinois

HOW INTERNATIONAL TRUCKS ARE MASTERFULLY SPECIALIZED TO THEIR JOBS



INTERNATIONAL

This Emblem Identifies Great Trucks

Today's Internationals are the finest values in International Truck history. And International values are so outstanding that for each of the last 15 years more heavy-duty Internationals have been bought by American commerce and industry than any other make.

But rugged quality is only one reason for International leadership. Another is International's masterful ability to *specialize* trucks to their jobs.

There are 22 basic International models. Gross weight ratings range from 4,400 to 90,000 pounds. Thirteen different engines are used. Axles, transmissions and tandems are available for every requirement.

International specializes its 22 basic models into more than 1,000 different type trucks—a result of 40 years' experience, engineering skill and matchless facilities. *That's job fitting!*

Now add this: International can accurately tell every operator just what his maximum loads should be in terms of the exact conditions under which his trucks operate—an exclusive International service that enables the operator to get the most in operating economy, low maintenance costs, and long, trouble-free performance.

For details of today's Internationals, *expertly specialized,* see your International Dealer or Branch.

40TH ANNIVERSARY OF INTERNATIONAL TRUCKS
1907-1947—Forty years of International Truck Service to Industry, Commerce and Agriculture

Motor Truck Division
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue **Chicago 1, Illinois**

Tune in James Melton on "Harvest of Stars" Sunday! NBC Network

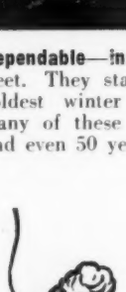
INTERNATIONAL

INTERNATIONAL Trucks

The Satisfaction Lasts When You Buy Products

Recommended and Guaranteed by KELLOGG

Dependable—in Any Weather! Hemingray Insulators defy rain, snow and sleet. They stand on guard through the hottest summer days and the coldest winter nights. Product of OWENS-ILLINOIS GLASS CO., many of these insulators are giving dependable service after 20, 30—and even 50 years. Every lot is tested hourly with precision instruments.

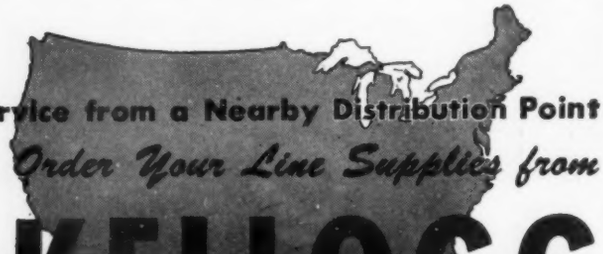


There's three-way satisfaction when you concentrate purchases of line supply and constuction materials at a single, responsible source: (1) The *quality* is right—all products are backed by the famous Kellogg DOUBLE GUARANTEE; (2) The service is right—orders are intelligently handled by experienced people; (3) *Delivery* is right—orders are shipped from the nearest of over 100 strategically located distribution points.

KELLOGG SWITCHBOARD & SUPPLY COMPANY

Branch Offices: Kansas City, San Francisco, St. Paul, Los Angeles

Factory and General Offices: 6650 S. Cicero Avenue, Chicago 38

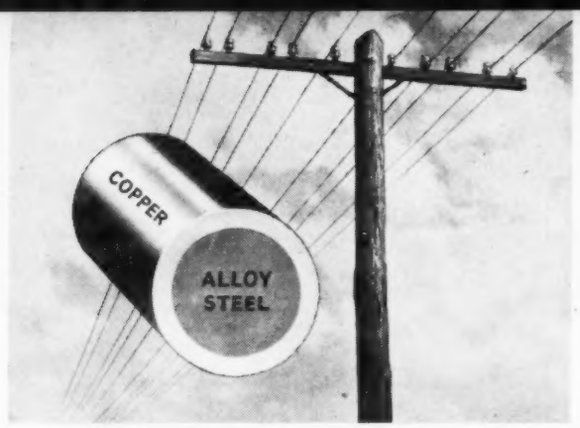


For Service from a Nearby Distribution Point

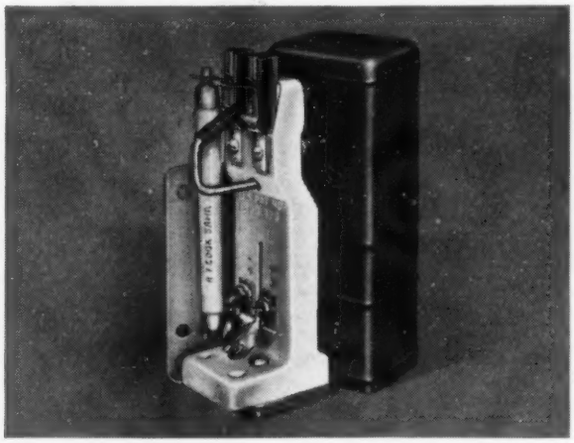
Order Your Line Supplies from

KELLOGG

Long Life Expectancy is built into pressure-treated Southern Pine Poles and Crossarms. Carefully and thoroughly treated by the AMERICAN CREOSOTE WORKS, INC., these poles have the extra durability required for dependable service under the toughest climatic conditions. For longer lasting, stronger poles, use "Pressure-Treated Southern Pine."



For Long-Life, Long-Span Lines, use Copperweld Wire. It's light in weight, small in diameter . . . very easy to string. A thick, protective covering of copper *permanently* molten-welded to an alloy steel core prevents rust. Made by COPPERWELD STEEL CO.



Built to "Take it"! The COOK ELECTRIC CO. "O" Type single-circuit Substation Protector is equipped with fuses and high potential non-grounding discharges. It's water-proof and fire-proof for installation indoors or out. There is a Cook "O" Type Protector to fit all your needs.

1 Spray Proof Vent Chambers. 2 High Acid Space. 3 Floté Plates. 4 Built-in Charge Indicators. 5 Hard Rubber Retainers. 6 Quarter-Sawed Douglas Fir Separators. 7 Super Braced Corner and Side Locks. 8. Supported Elements. 9 Steel Glass Jar (½ inch thick).
1
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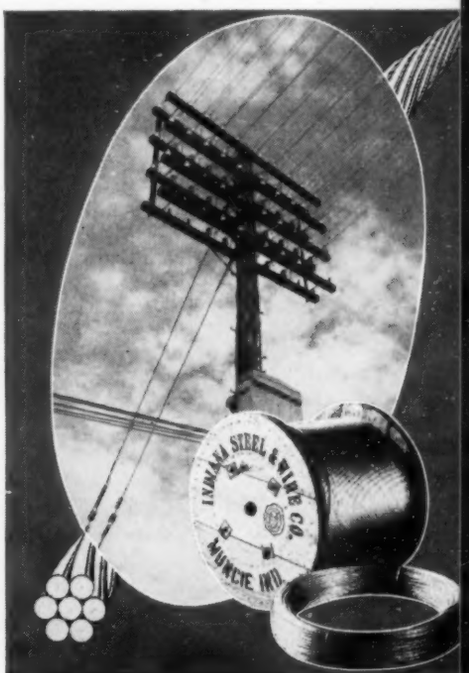
9

Modernize with Gould. For the latest in modern telephone battery design many engineers specify GOULD Floté. Built into this battery are all the modern engineering features needed for today's full float service. In addition, every Gould Telephone Battery has the famous Floté grid that eliminates low cells, and measurably contributes to operating efficiency, longer battery life and lower costs.

It's a Snap to make neat installations with Rhodes Telephone Wiring Nails, according to Independent telephone men who use them exclusively. M. M. RHODES & SONS maintain the high quality of these nails by means of rigid withdrawing, bending and immersion tests.

Dependable best describes "Eveready" Columbia" "Gray Label" Telephone cells. Dependable because they are manufactured by NATIONAL CARBON CO., INC. under rigid laboratory controls that assure high quality. Dependable because their sustained voltage means improved transmission efficiency.



Time-Tested Steel Strand. A ductile, adherent zinc coating, applied by the famous Crapo Galvanizing Process, provides lasting protection against corrosion in INDIANA STEEL & WIRE CO. Crapo Steel Strand. Its rugged strength minimizes maintenance expenses.

NEWS BRIEFS

West Coast Company Starts Building Project

Embarking on a program which will modernize its system in Everett, Washington, and the suburban areas now served by the East, South and West exchanges and to meet the future demands of increased population, in the Everett area, the West Coast Telephone Company has started construction of a new building. The new building, to be erected at an estimated cost of $200,000, will accommodate the new automatic switching equipment for the city of Everett and a new long distance switchboard. Some part of the company's accounting offices will also be located there.

The building is scheduled for completion early in 1949, when installation of new automatic will begin. During the same time, additional equipment will be installed at the East and West exchanges and the South exchange equipment will be replaced entirely with new apparatus.

The cost of the new automatic equipment when installed will be over $1,000,000.

◆

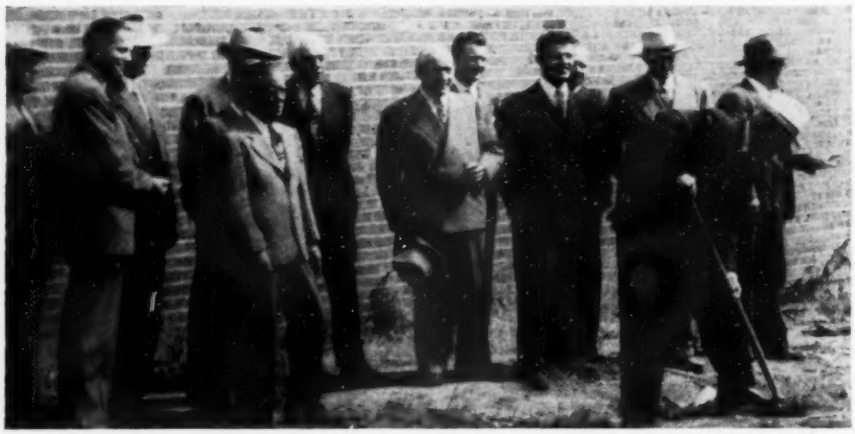
Central Telephone Co. Makes Organization Changes

The appointments of W. E. Sparger to Eastern Division commercial manager and of W. S. Beddingfield to North Carolina district manager have recently been announced by Col. L. D. Densmore, Eastern Division manager of Central Telephone Company and Associated Companies.

Mr. Sparger became associated with the Central Telephone Company in 1931 as chief accountant in the district office at Charlottesville, Virginia. In 1934 he was promoted to group manager with headquarters at Elkin, North Carolina. Following that assignment he returned to Charlottesville where he served as district commercial and district traffic supervisor for the company's exchanges in Virginia, West Virginia, and North Carolina. In 1941 Mr. Sparger was promoted to North Carolina District Manager which position he held until his recent promotion. In his new position, Mr. Sparger will be in charge of all commercial operations in the companies' Eastern division.

Mr. Beddingfield's telephone experience dates back approximately 40 years. He, likewise, became associated with Central Telephone Company in 1931, at which time he was local manager at South Hill, Virginia. Since then he has served as group manager in the Asheboro, North Carolina group, the South Boston, Virginia group, the Farmville, Virginia group and the Mt. Airy, North Carolina group. Mr. Beddingfield will now be located in Mt. Airy, North Carolina, where he will be in charge of the 17 exchanges in that District.

◆



Mayor Henry Arends wields the shovel as groundbreaking ceremonies are conducted on the $200,000 building to be erected by the West Coast Telephone Company. Cost of the new dial automatic equipment it will house is estimated at more than $1,000,000. Looking on were: Ray Dalton, vice president and general manager; G. E. Krieger, assistant general manager; L. Gray Beck, Everett District manager; A. N. Johns of San Francisco, operating vice president; N. L. O'Donnell, general accountant; Russell Loveland, equipment engineer; B. D. Starkweather, assistant secretary; and Lloyd Wallgren, purchasing agent. Others in the picture are City Commissioners L. H. Unzelman and Arvid Johnson, Contractor Paul Odegard, Ray Rudd, of the Odegard Constructions Company, and William Arild Johnson, AIA.

Illinois Bell Asks New Rate Increase of 8 Pct.

The Illinois Bell Telephone Company has asked the Illinois Commerce Commission for rate increases which would increase intrastate revenues about 8 per cent from the amounts sought in December, 1946. The proposed increase, the company said, amounts to $9,500,000 and took into consideration "other increased expenses which have occurred since the company filed its original rate increase petition with the commission on December 3, 1946." A temporary increase of about 14 per cent in revenues was granted by the commission on July 29. No specific rates were filed with the petition, but the company is preparing a rate schedule and will submit it to the commission.

◆

$15,000 Building Program For Continental, Ohio

Paul H. Kaufman, president of Continental Telephone Company, has announced that work has started on a $15,000 building program for Continental, Ohio, and vicinity.

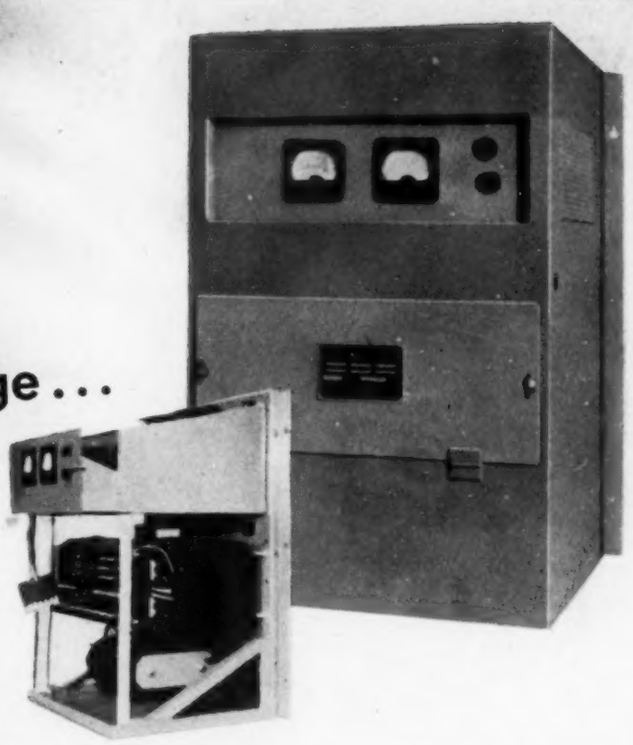
Since Continental Telephone Company purchased the old Farmers Mutual Company, officials and engineers of the new company have been working on plans whereby a modern type of telephone service could be furnished its patrons.

Difficulty in securing labor and materials, and slowness in delivery has delayed the plans to some extent. However, the company is hopeful of being able to cut the city over to full common battery service within the next three or four months.

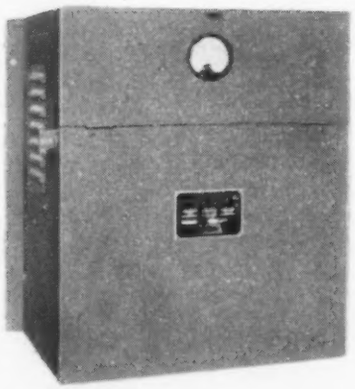
Greater Flexibility...

Greater Frequency Range...

Closer Regulation...



with the NEW RAYTHEON ELECTRONIC RECTICHARGER



To the high-power end of the well-known Raytheon RectiCharger line has now been added this new electronic model...available in capacities up to 24 amp. at 24 volts, or 12 amp. at 48 volts.

Compactness has been achieved by use of an electronic amplifier in conjunction with a saturable core reactor. In addition to a variety of input and output voltage combinations, this unit provides greater flexibility of adjustment, greater frequency range, and closer tolerance of regulation.

Long-life dry plate rectifiers, sturdy magnetic components and well-ventilated case make the Raytheon *Electronic* RectiChargeR a thoroughly effective and reliable telephone power supply.

For details, write for Bulletin DL-RCR-506

the RAYTHEON RECTIFILTER

OUTLASTS BATTERIES many times.

ELIMINATES TROUBLE and expense of routine service for battery inspection.

RELEASES WIRE carrying charging current from the central office to subscribers' PBX boards for revenue producing service.

MINIMIZES POWER COST because of high efficiency in converting AC to DC.

Write for Bulletin PL-RFR-508

RAYTHEON

Excellence in Electronics

RAYTHEON MANUFACTURING COMPANY

COMMERCIAL PRODUCTS DIVISION

WALTHAM 54, MASSACHUSETTS

Industrial and Commercial Electronic Equipment, Broadcast Equipment, Tubes and Accessories

Sales Offices: Atlanta, Boston, Chicago, Cleveland, Louisville, New York

WASHINGTON

Bureau REPORTS

BY ROLAND DAVIES and FRED HENCK

USITA

WHEN THE NATIONAL association of a sizeable arm of one of the country's most essential and important industries completes 50 years of significant service to its members and the public, even a Washington bureau should be permitted the privilege and luxury of extending its sincere congratulations.

The U. S. Independent Telephone Association and the nation's Independent telephone companies have worked hand in hand for so long to provide better telephone service for a substantial portion of the nation that it is impossible to determine where the contributions of one are divided from the contributions of the other. Thus, although the Independent industry itself is more than 50 years old, the "Golden Jubilee" anniversary of the USITA is by far the best opportunity for the industry's reporters to offer their felicitations.

The reporter who covers the Independent telephone industry—for those observers who do their stints for TELECOMMUNICATIONS REPORTS and Telephone Engineer's Washington Bureau we can speak personally—gains greatly in his association. We honor the past 50 years of accomplishments of the Independents, and we look forward to a substantial chunk of the next 50.

Left-Wing

DESPITE THE record of experience in England open for the inspection of all, the left-wing Progressive Citizens of America has come out for nationalization of a number of basic industries, including steel, coal mines, railroads and electric power utilities "to relax the stranglehold of concentrated private interests in our economic life."

For Independent telephone people, the omission of the telephone industry from the list was significant. Certainly, the widespread ownership of the telephone business in the United States has in the past halted any tendency toward government operation of the system, and it can be counted on to be a substantial deterrent to any such move in the future.

It is sure beyond a doubt that the telephone industry has not heard the last of proponents of government ownership, however. The nationalization virus, once entrenched, causes a fever which rises rather than subsides. Only continued efficient management and promotion of more and better service to all who desire it will prevent any increase in nationalization sentiments.

Coming Conventions

Virginia Independent Telephone Association, Hotel Roanoke, Roanoke, October 30 and 31.

Florida Telephone Association, Orlando Hotel, Orange Court, November 3 and 4.

South Carolina Telephone Association, Jefferson Hotel, Columbia, November 6 and 7.

Georgia Telephone Association, Henry Grady Hotel, Atlanta, November 10 and 11.

Alabama Independent Telephone Association, Jefferson-Davis Hotel, Montgomery, November 13 and 14.

Missouri Telephone Association, Governor Hotel, Jefferson City, November 17 and 18.

North Carolina Independent Telephone Association, Pine Needles Hotel, Southern Pines, November 20 and 21.

FCC

THERE ARE so many crises in life at the FCC that they have become commonplace. As in any Washington organization, of course, most of them are earth-shaking developments which never happen. At any event, here is a compendium of recent rumors and facts about sweeping changes at the Commission, in roughly chronological order:

(1) The FCC is so strongly committed to a divisional form of operation, in statements made before the Senate Interstate and Foreign Commerce Committee and in filing a proposal to split functioning with the Committee, that it can hardly back down. The original Oct. 1 deadline for the divisional plan, however, is out the window, and some time may elapse before the project gets rolling.

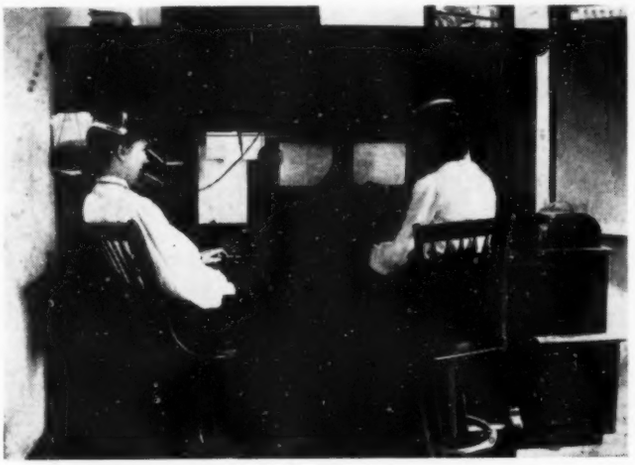
(2) Main reasons for the long time expected before the divisional system begins are the actual and rumored travels of the Commissioners. Chairman Charles R. Denny and Commissioners E. K. Jett and E. M. Webster have just returned to Washington after an all-summer siege at the Atlantic City International Conferences. Commissioner Jett will depart around the first of the year for six months with the new international Provisional Frequency Board, and Commissioner Webster is scheduled for two trips to London to attend maritime radio conferences.

Big question, however, is the situation of Chairman Denny, long rumored about to resign by the end of this year. The $10,000 Commissioner's salary is tip money compared to what the Chairman could make in private industry or law practice at this time, and no one is more aware of it than Mr. Denny. He is expected to vacation in November, and may announce his decision by Dec. 1. Incidentally, Commissioner Clifford J. Durr, whose term expires next year, probably is not long for the FCC.

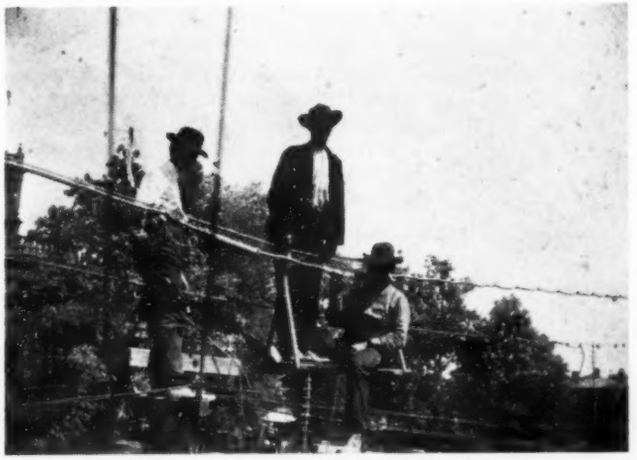
(3) The nation's broadcasters hopefully continue to promote legislation which would reduce the Commission, in that field at least, to a technical engineering agency, and would undoubtedly have effect on the agency's common carrier activities if passed. The Communications Act of 1934, which inaugurated the FCC, may be overhauled someday, but in an election year it is doubtful if Congress will offer the soap opera-conscious public

TELE-VIEWS OF EARLY DAYS

Magneto board of Mattoon, Ill., exchange about 1902. (Courtesy Illinois Consolidated Telephone Co.)



Switchboard of Southern Continental Tel. Co., Glasgow, Ky., in 1905. (Courtesy, J. N. Cox.)



Top Photo—Glasgow, Ky., 1902. Left—E. C. Warner, mgr., Southern Continental Tel. Co.; other two men unidentified. (Courtesy J. N. Cox.)

Right Photo—Unidentified linemen of the '90's. (Courtesy Lincoln (Neb.) T. & T. Co.)

Styles have changed considerably since this young lady operated her board in the late 1890's. (Courtesy of Northwestern Bell.)

"Get me the Governor, please," asked Mayor John Wilson of Honolulu on September 2nd, at the same time inaugurating Mutual Telephone Company's mobile service commercially.

an act emasculating the Commission's powers. Besides, there probably will not be time in the expected short Congressional session.

(4) Long range stategists report a thought gaining ground in GOP quarters to abolish several executive department agencies, including the FCC, and then create them again, IF a Republican President is elected. This, of course, would give the new Chief executive the opportunity to turn out seven incumbents, if he cared to. The prospect has some FCC-baiters licking their chops, but the hurdles are many and by 1949 the Republicans, even with a GOP candidate in the White House, may not see the necessity for such a move so far as the Commission is concerned.

Meanwhile, the Commission is staggering under one of the most unconscionable workloads ever handed a peacetime agency of its size. Little of this concerns telephone matters, but worth noting are the 20 oral arguments slated for October, more than 300 broadcast hearings scheduled for the next six or seven months, and the opening of a couple of virgin and highly significant fields—the international all circuits proceeding and the general mobile hearing, now postponed until Nov. 24.

Competition

A STEADY RISE in applications to the FCC for limited common carrier mobile radiotelephone setups, in which the operators of such companies would provide central dispatching service for all types of urban and general mobile users, indicates additional competition for telephone companies in the postwar communications field with the broadest horizon.

Best example of the big plans laid by the limited common carriers was an application for a $250,000 system in ten cities in five states, filed by Eugene S. Goebel, Sales Director of Motorola, Inc., thus far the largest mobile equipment supplier; Frank W. Walker, Chief Engineer of National Bus Communications, Inc., which is planning its own system for buses; and Robert J. Phillips, Chicago investment banker.

The company, known as Mobile Radio Telephone Co., will furnish the message relay type service only. Thus there will be no direct connection between the mobile system and the lines of telephone companies in the cities in which Mobile Radio Telephone will operate. Messages to and from vehicles will be relayed through the company's message center.

Although the Mobile Radio Telephone Co. application is the largest thus far, there has been a marked increase in the number of such requests filed with the FCC. In addition, another plan has been proposed by a group of Freeport, Long Island, citizens. They have been granted Commission approval for a cooperative community mobile service which they say opens the way for mobile service in smaller towns and cities.

Under the Freeport plan, doctors and other professional people, trucking and taxicab companies, laundries and operators of small businesses would have two-way radio equipment in their vehicles. Through continuous 24-hour operation of the central station of the community enterprise and the Freeport Telephone Answering Exchange, service would always be available for members of the association. The switchboard of the Telephone Answering Exchange would then relay radio calls over regular telephone lines. The Exchange is privately owned, but the association presumably would be a nonprofit organization.

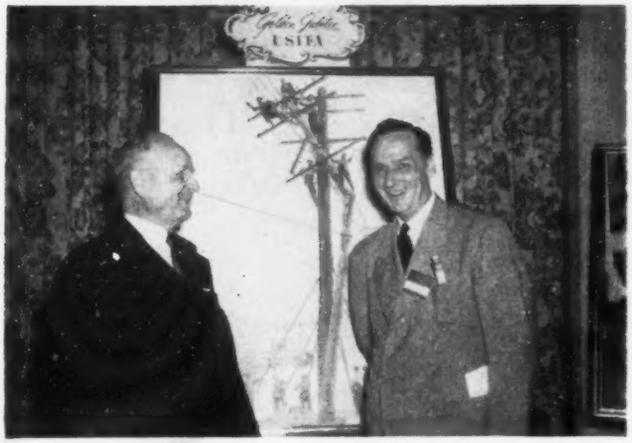
Union Warfare

THE NATION'S telephone companies, who frequently are targets of one kind or another for union criticism, this month have had the opportunity to observe the two major employee organizations of the telephone field shooting furiously at each other.

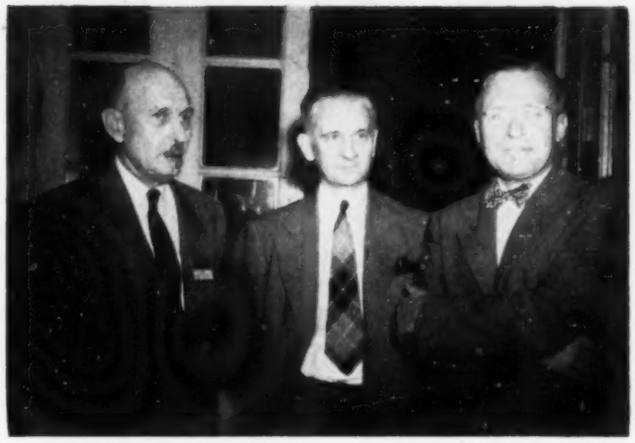
The battle royal started when the Communications Workers of America, the former NFTW, announced plans to set up parallel locals in the A. T. & T. Long Lines Division and among Western Electric installers to organize the employees of those two Bell System entities. At present, the American Union of Telephone Workers (former Long Lines Federation) is the bargaining unit for Long Lines workers, and it has swung over to the CIO Telephone Workers Organizing Committee. The Association of Communication Equipment Workers represents Western Electric installers, and it is not a CWA affiliate and has pronounced CIO leanings.

After the CWA announcement, which the union said was based on the requests of rank-and-file workers, the CIO swung back in a statement by AUTW President John J. Moran, former NFTW Vice President who is now CIO-TWOC Vice Chairman. Mr. Moran said that CWA President Joseph A. Beirne's "declaration of war is a lonely whistle in the dark. When Beirne blows his horn that's not Gabriel; it's Little Boy Blue."

Meanwhile, the CWA did remember its usual spot long enough to blast present price increases, and to announce later that "unless prices level off and gradually decline within the next five months, CWA will make substantial wage demands upon the employers." It said that "further industrial strife" in the telephone industry and elsewhere can be avoided if Congress will "fulfill its leadership obligations." Mr. Beirne said that "phone workers' wages are among the lowest in the country."



B. L. Fisher, Martinsville, Va., and R. A. Phillips, Lincoln, Neb., stop before old time picture displayed at USITA convention.



Herb Couch, Topeka, Kans., Floyd Ridings, USITA secretary, and Paul Graves, Spokane, Wash., discuss convention activities.

USITA Holds

GOLDEN JUBILEE CONVENTION

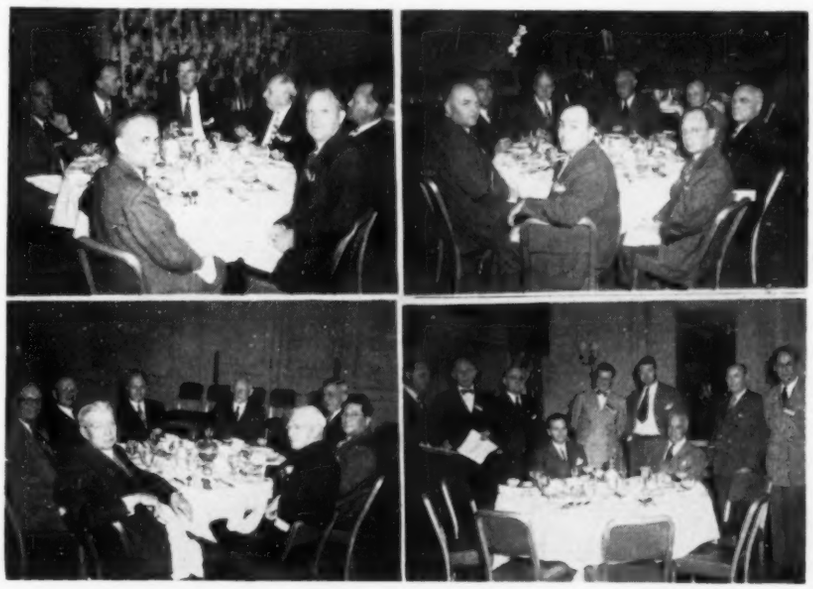
BY JOHN G. REYNOLDS
Managing Editor

THE WHIPPING of service problems which have followed World War II, improvement and expansion of present facilities to bring service to all applicants—city and rural—was the general keynote of discussions at the 50th Anniversary Convention of the United States Independent Telephone Association, Hotel Stevens, Chicago, October 14, 15, 16. Approximately 2,100 Independent telephone men and women attended the three-day session and heard industrial leaders chart goals of service achievements that, as explained by retiring USITA president R. A. Lumpkin, will cause *telephone industry capital requirements to probably be greater than the requirements of any other industry.*

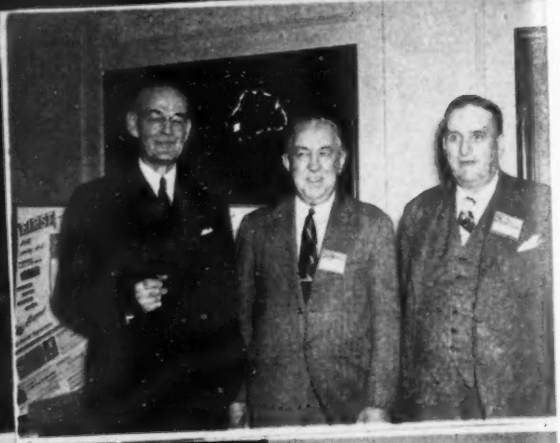
Emphasis was placed on prompt restoration of pre-war service standards and the industry's ability to maintain fair earnings through good times and bad. It was brought out in several discussions that future operations must be conducted on a new and increased cost level: that former earnings will not be restored by a lowering of operating costs, and that in its search for a workable pattern of income and price relationships, the telephone industry has been forced to resort to a program of rate increases.

President Lumpkin stated that upon the character of such increases, as well as their amount, depends the industry's ability to maintain a stable income record for the future. "Some increases have already been granted," he said, "and others are on the way. Satisfactory earnings must be maintained if earnings are to be continued and companies are to prosper."

Stressing that farmers can and will pay proper rates for modern telephone service William C. Henry, chairman of the USITA Rural Telephone Service Committee explained that "if the forward march of rural telephones in your exchange territory is at a half-step cadence, because of low rural exchange rates, the solution is to secure rates which will permit you to render adequate service



Directors and USITA officers photographed during luncheon session.



Photos on opposite page were taken by the T.E.&M. Camera during the USITA Convention.

and make reasonable rural line extension."

Mr. Henry stated that telephone companies in the central and eastern part of the United States are in general planning on converting their service to dial operation. Such conversions will provide a tremendous improvement in the quality of rural telephone service by improved signaling and ringing and a reduction in the number of parties on a line.

New Officers and Members of The Board

OSCAR BURTON, vice president and general manager of the Gulf States Telephone Company,

FRANK E. BOHN, veteran president of the Home T. & T. Co., Fort Wayne, Indiana, is the new USITA first vice president.

Tyler, Texas, long active in Independent telephone industry affairs and second vice president of USITA during 1946-47, was unanimously elected USITA president. Frank E. Bohn, veteran president of the Home Telephone & Telegraph Company, Fort Wayne, Indiana, became first vice president and Harold V. Bozell, president of General Telephone Corporation, New York City, was named second vice president.

USITA executive vice president Clyde S. Bailey was reelected for the fifth consecutive year. Treasurer Carl D. Brorein, Tampa, Florida, and secretary and assistant treasurer Floyd D. Ridings, Washington, D. C. were also reelected.

OSCAR BURTON, vice president and general manager of the Gulf States Telephone Co., Tyler, Texas, was unanimously elected USITA president.

Twelve members of the board were reelected for a three year term. Directors reelected were: John H. Agee, Lincoln, Neb.; E. M. Blakeslee, Santa Monica, Calif.; B. L. Fisher, Martinsville, Va.; L. W. Hill, Tarboro, N.C.; A. N. Johns, San Francisco, Calif.; R. A. Lumpkin, Mattoon, Ill.; F. R. McBerty, Galion, Ohio; Kelley McNish, Bristol, Tenn.; R. A. Phillips, Lincoln, Neb.; Leon Roberts, Chicago, Ill.; Roy Siemund, Chicago, Ill.; and John H. Wright, Jamestown, N. Y.

C. C. Pearce, Riceville, Iowa, was elected to the board to serve the unexpired term of Samuel Tucker, Pleasanton, Kans. L. F. Shepherd, LaFayette, Ind., was elected appointed to take the place of Charles F. Mason, board chairman of the Associated Telephone Co., Ltd., Santa Monica, Calif., who asked to be retired.

Three new USITA Executive Committee members were elected: Alden Hart, president of the United Utilities Inc., Abilene, Kans., R. E. Shotts, vice president of Telephone Services Inc., and Luke W. Hill, president of the Carolina Telephone & Telegraph Co., Tarboro, N. C. Retiring members were F. R. McBerty, Galion, Ohio; Frank C. Bohn, Fort Wayne, Ind.; R. A. Phillips, Lincoln, Neb. and W. C. Henry, Bellevue, Ohio. New USITA president Oscar Burton became chairman and past president R. A. Lumpkin, member ex-officio.

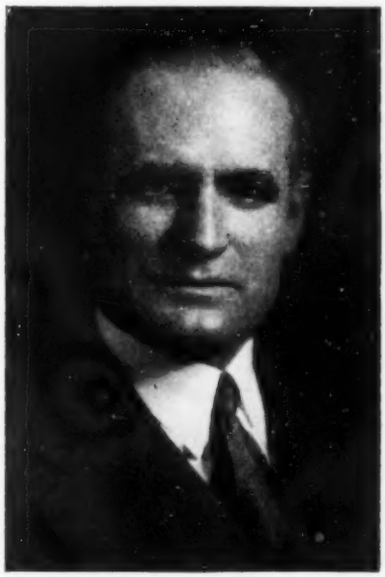
Carry-over members of the Executive Committee were: J. H. Agee, Lincoln, Neb.; W. M. Angle, Rochester, N. Y.; F. S. Barnes, Rock Hill, S. C.; C. S. Cadwell, Chicago; Harry Engh, Erie, Pa., and A. N. Johns, San Francisco, Calif.

Report of By-Laws Committee

R. A. PHILLIPS, chairman of the USITA By-Laws Committee, presented four resolutions for approval of the Association. These resolutions, which were unanimously approved during the first general session on October 15 were as follows:

(1) *"Resolved that Article III of the Articles of Incorporation of the Association be amended to read as follows: III. The Management of the aforesaid Association shall be vested in a board of not less than three (3) directors, the number of which, subject to such limitation, and the terms of office of which shall be fixed by the By-laws."*

(2) *"Resolved: that Section 6 of Article V of this association's*



HAROLD V. BOZELL, president General Tel. Corp., New York, was elected second vice president of USITA.

By-Laws which relates to the Board of Directors voting by mail, be eliminated and deleted therefrom."

(3) *"Resolved: That a section be added to Article VIII of this associations By-Laws, providing as follows: Quorum: Members holding one-tenth of the votes entitled to be cast represented in person or by proxy at any meeting of the membership shall constitute a quorum for the transaction of business of the Association. Resolved further that the present Section 4 of Article VIII be renumbered to Section 5 of Article VII."*

(4) *Resolved: That the first sentence of Section 1 of Article V of this Association's By-Laws be amended to read as follows: "Sec-*

(Please turn to page 74)

INDEPENDENT Telephone Industry TODAY & TOMORROW

By R. A. LUMPKIN, Mattoon, Ill.

President of
United States Independent Telephone Association

THE CELEBRATION of a Golden Jubilee should signify far more than the mere passage of a half century in the life of an individual or of an organization such as the United States Independent Telephone Association. The fact that there is gathered together here in Chicago the largest group of Independent men and women ever to be assembled for a national convention is proof of a greater significance.

This is a happy occasion indeed for all those persons who by their efforts, both past and present, have made this moment possible. Their names cover many pages in the annals of our history. We salute them all today.

Let us for a moment run back to the year 1897 and gaze upon a handful of men who had just then assembled in the City of Detroit. Here was a small group of determined pioneers who as separate individuals had been struggling to launch themselves into the midst of a new and promising enterprise. They had already sensed the value of cooperative effort in their endeavors. At this moment they were seeking strength in unity. The path they had chosen was a long and difficult one.

Independent telephone men, all of them, they had no doubt chosen Detroit as the site of their first convention because of the fact that in that city there was then being operated the largest Independent telephone exchange in the entire United States.

Living Costs

MY WORDS will be limited to a relatively few subjects but they are subjects which seem to me to rank among the foremost in importance as we look ahead to Tomorrow. Suppose we start with that old familiar subject, the cost of living, particularly the high cost of living that our industry is experiencing today.

High living costs are generally accompanied by high income. The current period is no exception. Income in the United States is at an all time peak and this is equally true of telephone company revenues. But whereas business generally has been able to retain, from income, amounts sufficient to set impressive records of profit and return, such is not the case in our own industry. Current operations of many units in the telephone industry are actually being conducted at a loss. Despite the fact that per station operating revenues of companies reporting to the USITA have increased nearly 30% in the past decade, per station income available for fixed charges has declined nearly 20% in the same period.

R. A. LUMPKIN, Pres., Illinois Consolidated Tel. Co., Mattoon, Ill.

We shudder to contemplate how much that decline might have been were it not for the amazing resourcefulness of our operating people and the fact that the use of plant and facilities has been stretched far beyond their engineered or ever dreamed of capacities.

In order to provide service for a maximum number of applicants, we have resorted to many expedients. Yet it must be recognized that the possibilities of those expedients have been long past exhausted. It would be useless to deny that the quality of our service has suffered as a result. Yet there is a tremendous amount of work ahead before even pre-war standards can be restored. These standards must not only be restored as quickly as possible, they must be vastly improved if our future operations are to keep pace with past tradition of the industry. Already we are living on borrowed time. The public's extra-ordinary patience will not endure for ever.

No one will deny that such a program will cost money. It has required well over a billion dollars of new financing in less than two years. The total amount required is indeterminable at this moment, but it is not likely that over the succeeding five-year period any other business in the entire United States will require a greater amount of new capital funds. We are rightfully concerned about how these funds can be obtained, for without question they must be sought in a competitive market. That is to say, that the telephone industry is not the only one that needs new money and all others will be equally aggressive in wooing the investor for his investment dollar.

If we are to be successful in our quest for new money, we must offer an investment equally as attractive as that of our competitor in the money market.

For the past fifty-years, the investment caliber of telephone securities has been unquestioned. New offerings have been readily absorbed by the investing public. Our job is to see that there is no change in this situation.

There are three well-known tests of a good security. First, there is the question of management. Second, there is the question of whether the commodity back of the security has a steady and future market. On the basis of the past record of our industry, the quality of management will go unchallenged. There is little doubt but what the telephone industry is here to stay. So, for the third point, what about the industry's abil-

ity to maintain fair earnings through good times and bad? In this respect our past record is exceptionally good, but what is the prospect for the future?

There can be no question but what our future operations must be conducted on a new and increased cost level—a level brought about by circumstances over which the industry has had no control.

Rate Increases

IN ITS SEARCH for a workable pattern of income and price relationships, the telephone industry has been forced to resort to a program of rate increases. Upon the character of such increases, as well as their amount, depends the industry's ability to maintain a stable income record for the future. Some increases have already been granted, others are under way. Satisfactory earnings must be maintained. For, generally speaking, both the public and the regulatory bodies set up in its interest recognize the need of adequate earnings if the requirements for good and adequate service are to be met.

Customer opposition to rate increases has been succeeded in many instances by appearances on the part of the public in support of company applications and generally accompanied by requests for improved service. The current approach of State Commissions is for the most part encouraging to those of us who are struggling with rising costs of operation. In fact, some regulatory bodies have been more alert to the consequences of rising costs than a number of the operating companies under their jurisdiction.

Toll Revenue

BECAUSE OF changes that have occurred in the character of our revenues during the past decade and a half, future recessions are bound to affect our earnings more than ever in the past. For example, a review of Independent Company operating figures as reported to the USITA in the late twenties, showed that at that time toll revenues accounted for only 23% of all revenues and were equivalent to about 81% of net operating income. By 1945, an astounding change had come about, not only had the proportion of toll revenue to all revenue increased by 52%, toll revenue had grown to a point where it was nearly 2½ times net operating income.

Toll revenue has always been an important part of our business, but never until the past few years has it been such a vital one. Devoid of toll revenue in the late twenties, our operations still would have been profitable, and while a 20% decline in toll revenue would have had a noticeable effect on our net operating income in that year, it would have occasioned no frightening alarm.

Yet, let us consider the result of a 20% reduction in toll revenue for 1945. This would have meant that our net operating income for that year would have been cut in two. It is not difficult to paint even a more gloomy picture for should we but substitute the 1942 toll revenue figure for that in the 1945 reports, net operating income vanishes into thin air.

Faced with such simple facts, it is impossible to escape the conclusion that our business has lost a certain part of that precious element of stability which characterized it in the twenties. Toll revenue, to a much greater degree than exchange revenue, follows the pattern of general business activity and because of our increased dependence on this class of revenue, we must be prepared to face greater fluctuations in earnings than we have known in the past.

Perhaps there is some merit in the suggestion that such a condition warrants for the industry a more liberal return than has been allowed generally over the past 20 or 30 years, perhaps a return comparable to that enjoyed in the hazardous days of early growth and development.

But meanwhile and certainly until such a view is more generally accepted, we must apply ourselves to the search for the kind of revenue that will carry us through bad times as well as good.

SALUTE TO R. C. RENO

WE SALUTE our friend and competitor, R. C. ("Pete") Reno, Vice President of Telephony Publishing Corporation and Editor of "Telephony", on his election to the presidency of the Independent Telephone Pioneers' Association.

Probably few people know how long and efficiently R. C. Reno has worked, frequently in the background, for the Pioneers. He is largely responsible for the organization's publication, "The Independent Pioneer". He has done much of the work in connection with the preparations for the association's annual banquet. He has carried on other duties of importance to the organization.

We feel some pride in the compliment paid the telephone trade press by the selection of one of its members as the head of this organization. It seems to us to be a fitting recognition of the important part played by the trade press in Independent telephony.

The Pioneers made a good selection when they picked Pete Reno to head their organization. They can be certain that the job will be well done.

As president of the Independent Telephone Pioneers' Association, our competitor Pete Reno will have the full backing and support, and also the good wishes, of the TELEPHONE ENGINEER publications.

RAY and ROY SMITH

Pioneer's Banquet Sparks USITA Convention

THE 20TH ANNUAL *Banquet, entertainment and dance sponsored by the Independent Pioneer Telephone Association at Stevens Hotel on the evening of October 15 won praise from the 2100 members of the Independent telephone industry who attended and participated in activities of the USITA Golden Jubilee Convention.*

The Pioneer Banquet Committee under chairmanship of R. W. Siemund, Chicago, who was assisted by J. B. Cook, R. G. Faulhaber, J. G. Kellogg, H. F. Lello, W. J. Pfaender, R. C. Reno, Chester Ruth, R. W. Smith, and W. H. Walter, presented a banquet and entertainment that contributed much to the success of USITA's 50th Anniversary Convention.

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The MARCH Of TELEPHONES To The FARMS

By WM. C. HENRY,
Chairman, USITA Rural Telephone Service Committee

DESPITE OUR best efforts since 1945, most of our companies today have on file a new high in the number of held orders, including many for rural service. The rural telephone problem persists. Its solution is on the way but continues to demand the best of our Industry.

Photos on opposite page were taken by the T.E.&M. Camera during the USITA Convention.

I reported in some detail at our Spring Convention on developments up to that time in the farm telephone situation. Since then, on June 18th, Administrator Wickard of the R.E.A. made public proposed standard contracts which he has approved for any R.E.A. borrower desiring to enter into an agreement with a telephone company for joint use of wire or poles. These contracts are the result of joint studies conducted between representatives of the R.E.A. and both groups in the Telephone Industry.

On August 8th of this year the A. T. & T. Company sent forward to its Associated Bell Companies a draft in tentative form, of a rural power line carrier agreement, which had been prepared by a joint committee of the Bell System and the Edison Electric Institute on Rural Telephone Service by Carrier on Power Circuits. This draft form of agreement, for use between commercial power and telephone companies, is rather general inasmuch as it was recognized that no single form of agreement would be suitable in all situations. Administrative details and contract rental fees are to be worked out in each specific case in accordance with standard plant construction practices of Telephone and Electric Companies. If you have occasion to want to connect telephone carrier equipment to the lines of private power companies, I am sure your connecting Bell Company will make a copy of this tentative form contract available to you.

However, the present cost of power line carrier equipment makes its use economical only under special conditions. Certain sections in the south and west, where distances between rural subscribers are great, the number of subscribers limited and construction costs high, offer the best possibilities for its use. Although regular telephone line construction is more practicable in the majority of cases, telephone companies should be alert to recognize those special cases where power line carrier systems will be desirable as an alternative to the construction of new conventional telephone lines or the rebuilding of especially long existing rural lines where a company is committed to maintain rural service.

WM. C. HENRY, president and general manager Northern Ohio Telephone Co., Bellevue, Ohio.

There is little uniformity in the Independent group in the matter of extension of new lines. Many of our operating companies, including some of our Class A members, are today continuing to charge the applicant for the extension of rural service beyond one or two poles. Companies that are serious in their desire to solve the rural telephone problem are making rural line extensions up to from one-quarter to one-half mile per customer to be served, and wire line extensions of from one to one and a half miles per customer, on existing company-owned poles, without construction assessments.

Some companies partially protect themselves by requiring the subscriber to execute contracts for service for periods varying from one to five years based on the length of the line extension. In several cases the customer is required to also make advance rental payments of from six months to a year. These practices vary with almost each operating company, and in general reflect recently liberalized line extension rules.

I ask you, have you in your own company liberalized your line extension rules to the greatest reasonable extent essential to the maximum development of your rural service? Are you applying these line extension rules on an area coverage basis? If not, these are matters which merit your prompt and serious consideration.

In addition to making rural service available to all who desire it, we must carry forward a definite program to improve the quality of rural telephone service. Multi-party lines, with eighteen to twenty or more code ringing telephones on one line, may have provided acceptable service when they were first established, but that is not so today. Local calling rates per subscriber have tripled since 1914, but the number of subscribers on rural lines has in many cases remained constant or even increased. As calling rates increased, rural service has been down graded. Surveys which have been conducted within the last several years all clearly show that the most persistent criticism of rural telephone service is the large number of telephones on a line. Overloading multi-party lines stems from the desire of our Industry over a long period of years to keep the rate for rural service as low as possible, and to defer construction of additional costly rural line facilities.

Certainly our most pressing rural problem is to provide telephone service to all who desire it in our exchange areas. When this has been accomplished, there will be a mounting demand for an improvement in the quality of rural party line service. We have made a good start. But despite the fact that in the past two years we have doubled our normal rate of increase in rural customers, the job is only well started. The rural telephone problem in our industry is still demanding of us a solution. (*Abstract of paper presented during recent USITA Convention.*)

The ALL-AMERICAN TELEPHONE TEAM

By

KEITH S. McHUGH,
Vice Pres., A. T. & T. Company

I WOULD LIKE to start by saying, in behalf of all your Bell System neighbors, how very pleased we are to be taking part with you in this Golden Jubilee celebration. We all of us say, "Congratulations!"—and we're happy that through The Telephone Hour we have been able to help spread the word of your progress and achievements, and at the same time tell the people of this country something of the esteem in which we hold our fellow-workers in the Independent telephone industry.

You and we are engaged between us in furnishing telephone service—the best possible service—to all America. There is not a moment in time—not one—when Independent and Bell System forces may not be called upon to act together, and always to the same identical purpose, which is to enable people anywhere in our land to talk with each other regardless of distance.

Just as the telephones that the industry serves are interconnected, and precisely because they are interconnected, the responsibilities, the problems and the progress of different units within the industry are interwoven and interdependent. Only in one way can we serve all the people of this country, anytime, anywhere, and serve them better as the days and years go on. That is by working together, thinking together and planning together on all our common problems; by All-American team—play all the time.

Cooperative Spirit

THE COOPERATIVE spirit of the telephone industry during the war was exemplified in the Industry Advisory Committee which worked closely with the War Production Board, and which had serving on it more Independent than Bell System members. In those Committee meetings and in the preparatory work outside, everyone's interests were completely subordinated to the national purpose. Over these years there was not a single instance of real disagreement between the Independent and the Bell representatives on any matters affecting the war-time service job. Such a record is the best kind of evidence that we will work successfully together in the years of peace.

Fifty years ago there were hardly more than 500,000 telephones in the whole country; methods of operation were cumbersome; transmission was severely limited; and the equipment then in use was hardly capable of doing more. Today, with the development of equipment which can perform far beyond the most adventurous imagination of 1897—and which in total costs more than $12,000 per employee—telephone service is comparably better in speed, in quality and range of transmission, and in all-round convenience to the user. And the pay-off in growth of service and in the opportunity for employment has been that today there are more than 33 million telephones in the United States—65 times as many as there were half a century ago—and some 600,000 employees in the operating telephone companies which provide the service.

KEITH S. McHUGH, vice president of the A. T. & T. Co.

Along with improvement of plant and methods, the increase in quantity, quality and value of service, and the greater efficiency and productivity of telephone employees, have come, of course, shorter working hours and higher wages. These are the direct result of being able to do more work in less time. And the whole process flows out of the ability of all branches of the industry, first, to find better and more efficient ways to do the job, and second, to earn enough so that the savings of investors will always be forthcoming to put the improvements into operation and to provide the plant needed as the service grows.

We in the Bell system, then, are perfectly certain that the greatest benefits to the public and the greatest advantages to all companies will flow from the habit of considering how any new service, any change or improvement, or any new method affecting joint operations, can best be made to function in the interest of the whole public which the whole industry serves. We want that to be the starting point of our basic thinking, and we intend to keep that view in our consultations with you. We hope you feel the same way about it.

Mobile Service

THE introduction of telephone service for automobiles and other vehicles is a splendid example of the kind of cooperative thinking and planning that I am talking about. It was obvious from the start that the most careful attention would need to be given to the problems of all companies. Also, since the service by its very nature is quite complicated, it was apparent that there would be great advantage in keeping administrative procedures between companies as simple as possible. Through the joint work of Bell and Independent people, with both groups making important contributions, mutually satisfactory answers have been found to a wide range of problems. Not only so—a tremendous amount has also been done and continues to be done to extend full knowledge and understanding of the whole program throughout the entire industry.

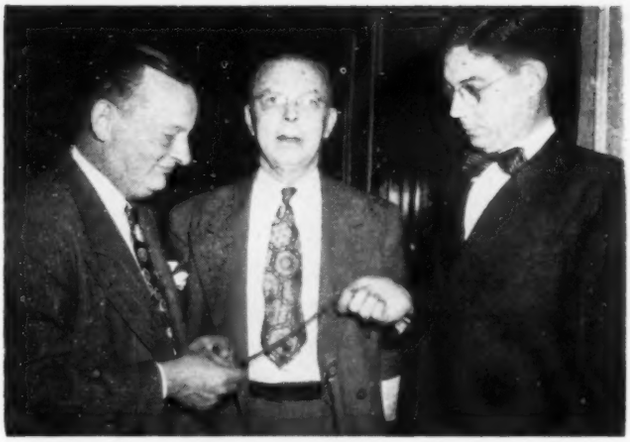
In the same way, the program to extend toll operator dialing has had to be grounded on full consideration of the situations of all companies of all size in all parts of the country. I will mention only one typical question: how can the nation-wide numbering plan be put into effect without complicating the local numbering and requiring expensive equipment changes at small dial exchanges?

To meet this problem the equipment at control switching points is being designed to translate the nation-wide codes received, and send on to the small offices codes which fit in with the existing numbering and equipment arrangements. In a few cases, of course, code conflicts between central offices will need to be eliminated. This is being done by joint study

The installation of more and more unattended community dial offices offers another example of the way in which units in the industry are becoming mutually interdependent to a greater degree than ever before. Here again Bell and Independent people have teamed together working long and hard to answer the many questions raised by unattended dial operation, particularly in view of the advent of toll dialing. As a result, notes have been jointly prepared dealing not only with equipment and operating features, but also with cases where it will be found mutually advantageous for one company to do the operating in the master office for the community dial office of a second company. This material will be of wide value to the industry as a whole. And it is worth special mention that these notes point to many opportunities for the larger companies, Independent or Bell, which have had more experience with such problems, to render assistance to smaller companies in connection with their community dial projects.

These are some but certainly not all of the ways in which it seems to me we can do a thoughtful job together to make this All-American telephone team of ours a better team than it has ever been before. I could mention others. The exchange of ideas and information in tackling our common problems on the farm service job has been extremely valuable to all concerned. We have worked closely and well together in considering how power line carrier and joint use agreements with REA cooperatives and the power companies could contribute most to the further development of rural service everywhere. Looking to the near future, as communities may come within areas for which extended local service is indicated as a public need, we shall have much to do to work out the most effective possible arrangements.

So this team-work I am talking about is a practical day-to-day job. But it starts with an attitude of mind. In the Bell System we start with the conviction that the industry-wide approach on common problems is essential—that we must look at the whole picture rather than any part of it—and that we'll get the best results of we look at the whole picture together. We shall want to continue to sit down with you in the planning stages, and in all areas the Bell Companies are seeing to it that they have competent, experienced people who will make it their business to cooperate with you on the whole range of joint problems and opportunities.



Col. Ed. Love of Koiled Kords, Lloyd Wright, Columbus, Ohio, and John Moran, Cameron, Mo., pause for the T E & M camera.

L. H. Warner and T. S. Gary, of Chicago, and Joe Byrne, Madison, Wis., were busy during USITA convention.

Today, as we celebrate the first half century of service of this Association, there are any number of young men and women 20 years old, more or less, who are just starting out in the telephone business. Year by year, the next half-century of progress will be increasingly theirs; and as they grow into the business, and grow with it, and as the new leaders among them prepare to take the helm, they will want to have from us all the help that we can give. The best way for us to assure them that help, it seems to me, is to keep our own sights high and keep on raising them as we go along. If we do that, and I am sure we will, we can have complete confidence in the job that the young people of today will do.

No one can now foretell the precise extent and character of telephone service 50 years from now. But there are a few general characteristics that most of us cannot help seeing in our mind's eye.

Unless continuous calamity overtakes the world I see no reason to doubt these prospects, provided only that the will to accomplish them energizes everything we do. And here in this country, our All-American telephone team has greater opportunities than are generally to be found elsewhere. The privately owned telephone companies of America have always led all the rest of the world in bringing fast, dependable telephone service to offices, homes, and farms. In doing this a great industry has developed giving useful and interesting employment to hundreds of thousands of people. All this has been possible because the job has been done with American zest and enterprise, and because those charged by the public with the regulation of these companies have had the wisdom over the years to permit them to earn enough to secure the capital needed to expand and improve their service. The social and political events ahead are hidden from us. With good will between us, whatever new troubles lie ahead—and we may be sure there will be many—can be met and surmounted, to the end that the people of this nation will continue to have an increasingly finer telephone service and always the finest in the world.—(*Abstract of paper presented during recent USITA Convention.*)

50 Years of Telephone Development . . . . And A LOOK AHEAD

By
DR. FRANK B. JEWETT,
Past President of The National Academy of Sciences

IN THE twenty-odd years that had elapsed since Bell exhibited his new gadget at the Centennial and the original Bell Company had undertaken its commercial development, the art had passed roughly through two rather distinct stages and was then about to enter a third. Through both, however, the ideas of personal aggrandizement rather than team play and the idea of an adequate public service operated at a reasonable profit had been dominant factors and to a large extent were still much in evidence in the early 1900's.

In the first era monopoly based on patents was the keystone of the commercial arch and the development of the physical things needed was primarily in the hands of ingenious inventors. Since no two of them had exactly the same ideas, there were about as many solutions of any problem advanced as there were men working on it. About the only semblance of uniformity was in the telephone instruments themselves and this only because the Bell Company exercised its patent position by retaining ownership of them and licensing their use.

This policy, which was maintained for many years and was violently assailed both within and without the Bell System was, in the light of history, probably the most important factor introduced in the early days in setting the framework for the preeminence of telephony in the United States. It insured a degree of uniformity and orderly advance at the very heart of the structure. A striking proof of this is to be found in comparing the history of telephone development in the United States with that in France where for fifty years exactly the reverse policy was followed, viz, that of user ownership of instruments and no standards. During more than fifty years French telephony was the poorest telephone service ever offered the public. It was the basis of a never-ending flood of ridicule and jokes.

DR. FRANK B. JEWETT, retired president of Bell Telephone Laboratories.

Through this first era and much of the second, the problems of the manufacturers must have been a continual headache.

Progress during the first era did, however, develop a sufficient amount of data to permit progress to be made on a more orderly engineering basis. While the individual ingenious inventor continued to play an important part in its growth, physical development during the second era was increasingly in the hands of trained engineers.

These men were not scientists in that they did not attempt to develop new fundamental knowledge. They were technologists trained in the engineering schools of the time and with a knowledge of the fundamentals of controlled experimentation. As I will point out later, their great lack was the lack of adequate tools for controlling their experiments and drawing definite quantitive conclusions from them.

Despite this serious handicap, the art under their guidance during the second era made astounding progress. Toward the end of the era, i.e., about 1900, it became increasingly evident that if progress was to continue their efforts would have, if possible, to be supplemented by those of men with a different and broader training in fundamental science.

During this second era other things of vast importance in the further development of telephony as a public service had happened both inside and outside the art. The basic patents controlled by the Bell Company expired and so opened large sectors of the field to a competition which had not existed in the earlier years. Partly because of public dissatisfaction with Bell service and partly because of the lure of anticipated large profits in manufacture or operation, a host of entrepreneurs and with them a host of independent operating companies, large and small, came into being as a result of the freedom thus given. In the beginning and for many years until your Association was formed, there was little or no coherence or unity of aim among these companies. Nor in many instances was adequate provision made either for proper financing or proper continued maintenance of service once the initial equipment began to wear out.

Partly this was due to the fact that many who entered the field were ignorant of what was required of a stable public service and partly because many of the promoters were interested primarily in quick profits and had little or no concern in the long range health of their projects.

The decade of the 1890's was the period of the original Sherman anti-trust legislation and of the most violent anti-monopoly agitation the country has ever known. Yet despite this the public had become so disgusted with the poor, inadequate and, in the case of business concerns, the double cost of telephone service under the competitive setup, that it came to realize that here was a field wherein each locality regulated monopoly was the proper arrangement. Every other country in the world has sooner or later learned the same lesson and by the same hard road of experience.

It is one thing to learn the lesson and quite another, however, to develop a proper national structure

(*Please turn to page* 56)

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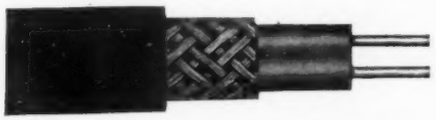

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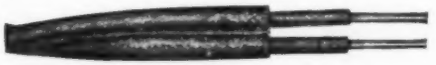

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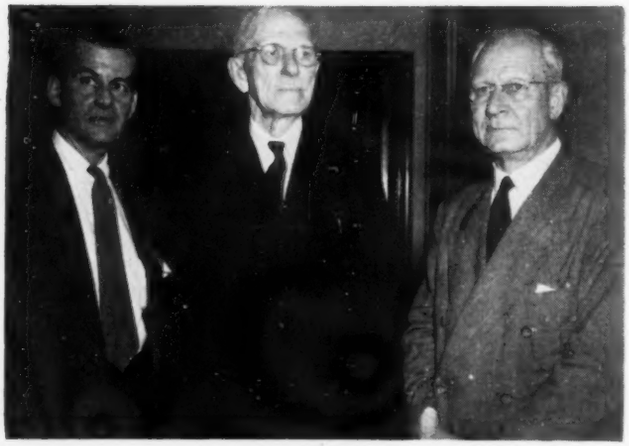
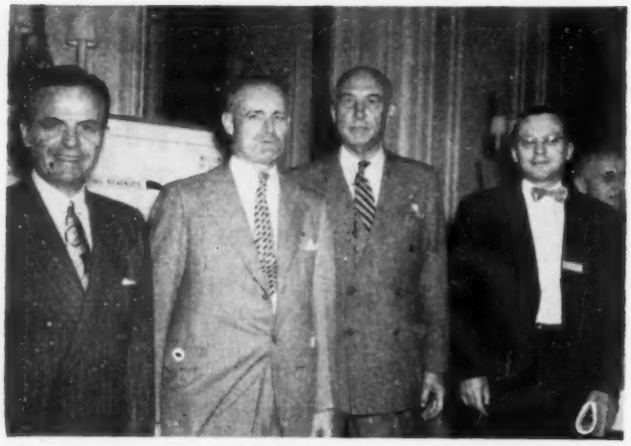
Oveta Grigsby, Madison, W. S. Gottry, Columbia, Mo., and Cecilia Burke, Madison, discuss USITA convention.



Telephone Engineer's Don C. Sorensen, John H. Wright, Jamestown, N. Y., and John Wass, Chicago.



USITA exec. v. p. Clyde S. Bailey, Harold Bozell, and R. A. Gantt, New York chat with friends during intermission.

Stromberg-Carlson's Art Gibson and Cy Barger demonstrate equipment to Mr. and Mrs. Foster B. McHenry, Jefferson City, Mo.

under it. It takes time, much statesmanlike good will, and much give and take to unravel the old skein and produce a satisfactory new one.

I suppose that the ultimate goal of commercial telephony here in the United States has always been the same, viz, the furnishing of a satisfactory, dependable, no-delay service, on demand, any time, between any two telephones anywhere at a cost which will not materially restrict use of the telephone by anyone. Certainly it has been the goal during the nearly fifty years I have been concerned with its development. To a large extent it is an aim which has largely influenced many of the broad trends of research and development.

In some sectors, notably in local service, the art has approached close to the goal—in others, it is further away and in some sectors hardly more than a beginning has been made. In many of these latter sectors, particularly where traffic is bound to be light and sporadic, the barrier is mainly a question of cost rather than absence of the physical things required to give the service. The first job of research and development when confronted with requirement of a new service is to find out how to give it at all, and then to find out how to give it in a manner that will satisfy the customer.

Telephony, or any other form of communication or transport, to be a real service which men employ automatically in the organization of their social and business lives, must be more than an erratic convenience. Reliability is a *sine quo non* in the making of it a stable industry. This requirement has been a principle factor in telephone research and development.

Possibly the greatest single factor involved in the complex of achieving the goal of an ideal telephone service which has influenced research and development during the past fifty years is that of an essentially "no delay" requirement at all times. The problem arises from man's normal habits of life and the fact that his desire to use the telephone is concentrated largely into a few hours of the twenty-four. If his satisfaction with the "no delay" aspect is to be met, it must be met equally at 10 A. M. and 3 or 4 A. M. This means that facilities meeting all other requirements must be so cheap that for the total revenue they can produce they can be provided in such quantity that a large part of them can lie idle and unproductive a major part of the time.

Added to the normal urge to re-

duce costs in order to admit of lowered rates, this pressure on research and development becomes enormously powerful.

Now in closing, just a word by way of looking ahead. If my views have any merit, it lies in the fact that being removed from active participation in the daily problems which bulk large, one is impressed by the distant forest rather than in the stately trees which constitute it.

Many of the old frontiers are gone and will never again be frontiers. Others, such as the goal of better, cheaper service to more people under more conditions, remain as challenges and always will.

It seems clear that whatever development of means and methods the future has in store, ordinary person-to-person telephony will always remain the big brother in the field of electrical communication. Also that in its field conversations between fixed terminals in home, office and factory will be the principal sources of traffic and revenue.

This is not because of any unique technical peculiarity that inheres in telephony as contrasted to other forms of electrical communication. It is merely because man's principal means of intercommunication is by speech and hearing and telephony merely extends his powers. Likewise because in the main his needs for distant oral communication are from his home or place of business.

Photographed between USITA convention sessions: H. R. Christianson, Muskegon; Harry Engh, Erie, Pa.; Frank Cuppy, Lafayette, Ind.; Roy W. Siemund, Leich Sales pres., Chicago; G. B. Foscue, Chicago.

While there are a host of other places from which he may wish to talk on occasion, the provision of facilities for enabling him to do so are essentially adjunct. They may, however, be very important and necessary adjuncts that should be provided if a complete service is to be given. They may or may not carry themselves financially and the standards of the main service other than adequate transmission may not be justified in them.

Likewise there are many services which require essentially the same kind of facilities necessary in the giving of regular telephony. They may be either spare facilities or those which the telephone company can provide and operate more economically than anyone else. Or they may be facilities such as superimposed telegraphy which are normal by-products of the regular telephone plant.

Many of these adjunct things we now have or know about. Others are bound to arise as the art progresses and as conditions of life change.—(*Abstract of paper given during recent USITA Convention*)

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"RESPONSIBILITY" . . . .

By DR. JAMES E. McCARTHY
Dean, College of Commerce, Notre Dame University

A FEW EVENINGS ago, while listening to the radio, I heard an announcer go through a routine with which each of us is familiar. The sponsor had an article to give away. All that I had to do to get the item was to send in my name and address together with a box top "or a reasonable facsimile thereof."

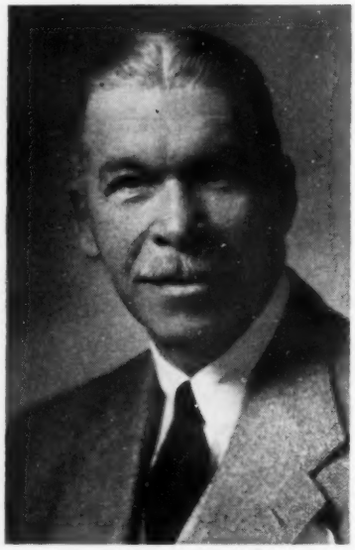
I let my mind play with some of the broader implications of that word "facsimile." I began to wonder if in many of our dealings with one another we are not using facsimiles —some of them far from reasonable —instead of genuine qualities of mind and heart. And, I wondered further, if this substitution has not come about for the simple reason that a kind of Gresham's law seems to be operating in the field of human relationships.

In the matter of ethics, for example, the debased currency of self-interest has largely driven into hiding the honest gold of unselfish devotion to the public interest and welfare.

More and more the give-and-take of human intercourse is not based on personal and professional integrity, but upon a cold, calculating and completely pragmatic answer to the question, "Can I cut a sharp corner and get away with it?"

I hold no brief for the practitioners of the cult of "getting away with it" —for the purveyors of facsimiles, reasonable or otherwise. But neither can I work up much sympathy for a public that has docilely accepted a watering of standards of morality, conscience, good breeding, good workmanship, and personal responsibility. The truth is that a gigantic fraud is being perpetrated, and the public, because of moral lethargy has become a party to it—an accessory, you might say, of the crime of which it is the victim.

As long as the attitude remains, we must reconcile ourselves to the wanton waste and extravagance of national income in chimerical causes, both domestic and foreign. As citizens, we must realize the truth of the old saying that everybody's money is nobody's money. Apparently, the current fiscal attitude is that there's money in the till, and more where that came from. But more than one individual and more than one business institution has ended up in bankruptcy by following the financial policy of easy come, easy go.



DR. JAMES E. McCARTHY, Dean of the College of Commerce, Notre Dame University.

As a matter of history, there is a logical relation of cause and effect between the decline of personal standards and the decline of national standards. One period after another bears tragic witness to the fact that personal integrity and national integrity are inseparable. When one disappears, the other inevitably disappears also—it is only a matter of time.

The vehicle of our economic salvation and our political future is personal responsibility. Denial of personal responsibility is abdication of the most precious throne that man was intended to occupy. A throne that is his by virtue of his manhood and whose occupancy sets him apart from the beasts of the field.

Too many of us have erred for too long by regarding personal responsibility as an irksome burden to be slid off onto somebody else's shoulders, or to be sloughed off entirely. Therein lies the cause of much of the nation's unrest. Therein is the cause of much of man's injustice to his fellow man.

Photos on opposite page were taken by the T.E.&M. Camera during the USITA Convention.

I am not a reformer. Yet I like to think of what our affairs would be like if each of use were to assume his fair share of the responsibility; to think of the possibilities if we were honest with ourselves and with others; if we were scrupulous in performing our duties as we are in demanding our rights.

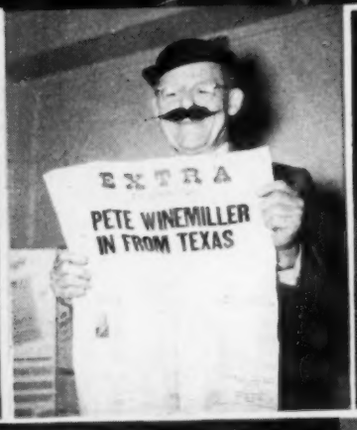
Under this utopian scheme, capital and labor would begin to emphasize points of common agreement instead of disagreement. Before long, popular suspicion of both would disappear. Furthermore, because the present capital-and-labor feud is playing into the hands of the Communists, those enemies of ours would be deprived of one of their most potent weapons.

Our representatives in all branches of government would do an about-face. It would suddenly come to them, almost as a revelation from on high, that government does not exist for the sake of perpetuating bureaucrats in their jobs, but for the sake of the governed.

All Americans—workers, management, owners, and consumers—would see that one group can not for long get away with anything at the expense of the others; that their interests are identical, and that in the last analysis they rise or fall together. No matter what our individual position in life, no matter what our place in the national economy, all of us have one thing in common: personal responsibility—to God, to ourselves, to our fellow man.

Once we realize this as a nation, there will no longer be any danger of cynicism, ignorance, rabble-rousing, or alienism undermining a system of politics and economics which, despite its faults and despite its detractors, is still the last best hope of earth.—*Abstract of Paper Presented at USITA Convention.*

BUCKEYE


EXTRA
PETE WINEMILLER
IN FROM TEXAS

REPORT From WASHINGTON

By CLYDE S. BAILEY,
USITA, Executive Vice President

WHAT THE future holds out for the Independent segment of the telephone industry depends more upon the general economic diet and climate of the country as a whole than upon any other single factor. Our industry is not separate and apart from the general economy. Speaking broadly, its pulse rises and falls with general economic conditions, the same as in most other businesses.

While we have a sentimental attachment for the things of the past, it not the past in which we are living. Ours is a dynamic industry in a dynamic age. We should of course review the past in order to have an understanding of that on which we have builded. But we must also appraise the present and to the extent of our ability forecast the future. It is for tomorrow that our public service obligations require us to plan. I shall therefore now leave the past and offer a few comments upon current problems.

At the very outset, what about our present service problems?

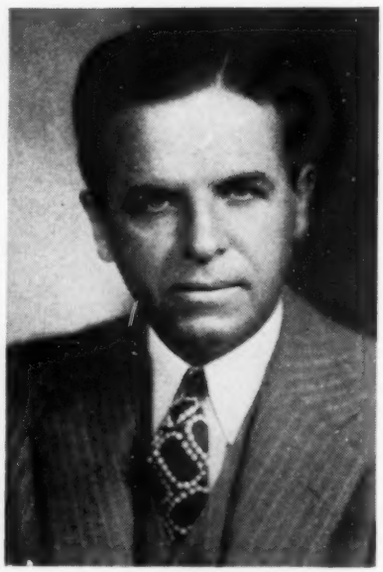
The birth rate of new stations since the end of the war, our station growth, has been high. Since V-J Day our Independents in the aggregate have installed upwards of a million telephones. The Bell System companies have installed more than 5½ million. But large numbers of people are still waiting for service.

There was a service problem following World War I. It was eventually licked. The service problem which has followed World War II will also be licked as fast as telephone companies and telephone manufacturers acting in cooperation are able to get the tools to do the job.

Association Activities

WHILE ACTIVITY in legislative matters is not the principle function of your Association, it is natural and proper when measures are pending before Congress in which the Independent segment of the telephone industry is interested, that your organization should seek an opportunity to express its views.

Legislation of direct interest to us in the present Congress, pending or already advanced to enactment, may be enumerated as follows: (a) Legislation proposing a cabinet investigation of utility rates; (b) rural telephone legislation; (c) tax legislation; (d) Taft-Hartley Labor Reform Bill; (e) a Statute of Limitations, and (f) Minimum wage legislation.



CLYDE S. BAILEY

One of the important activities of our Association is the compiling and distribution of accounting and statistical data relating to the operations of Independent telephone companies. Our annual statistical reports have been restricted to the Class "A" and "B" companies because of inability to obtain reliable underlying figures from a sufficiently representative group of the smaller companies. In time we hope to be able to obtain figures from all companies regardless of size, so that the accounting volume may contain a more comprehensive showing of the results of operations of companies in our branch of the industry.

This part of the Association's work is carried on by Secretary Floyd D. Ridings, who also serves as our statistician. The statistical report covering Class "A" and "B" company operations was distributed from the Association's headquarters last week.

Class "A" companies in 1946 accounted for 3,098,205 stations and Class "B" companies 134,417 stations, a total of 3,232,622. This represented an increase over 1945 of 369,907. Thus the stations of 265 "A" and "B" companies make up substantially more than half of the estimated 5,950,000 stations served by 6,000 Independent companies.

The total plant investment of Class "A" and "B" companies on December 31, 1946 amounted to $498,566,000; $48,747,000 greater than 1945.

In 1946 the Class "A" and "B" companies reported gross operating revenues totaling $154,757,000, an increase of $19,263,000 over the preceding year. Of this amount $9,702,000 was from local service and $8,735,000 from toll.

Operating expenses other than taxes amounted to $107,054,000 in 1946, or $20,912,000 greater than in 1945. The increase in operating expenses exceeded the increase in operating revenue by $1,650,000.

Because of the reduction of federal income taxes in 1946 the "A" and "B" companies were able to show a net increase of $4,104,000 in the combined net operating income. The sum of $22,692,000 was paid out in direct taxes during 1946 as compared with $28,444,000 in 1945. The ratio of direct taxes to net operating income in 1945 was 57.6%. Because of the reduction in federal taxes in 1946 this ratio was reduced to 47.6%.

Again in 1946 the largest increase in operating expense is reflected in traffic expense. Of a total operating expense increase of $20,912,000, $8,100,000 was in traffic expense. Increases in other operating expense accounts were as follows:

Maintenance $6,057,000; Depreciation and Amortization, $787,000; Commercial, $2,407,000 and General and Miscellaneous, $3,561,000.

The net amount available for the payment of fixed charges increased in 1946 over 1945 by $4,910,000. The total amount which was available for fixed charges at the close of 1946 amounted to $26,197,000 as compared with $21,287,000 at the close of 1945.—(*Abstract of paper presented during recent USITA Convention.*)

DIAL Interexchange Committee Report

By F. E. NORRIS,
Chairman, USITA Dial Interexchange Committee

THE DIAL Interexchange Committee, appointed in 1945, was charged with the responsibility of studying and reporting on two projects. The first of these two projects concerns the Nationwide Operator Toll Dialing plan. That plan—as I believe you all know—contemplates an arrangement whereby an operator in any part of the country may complete a connection to a telephone in any other part of the country, without the assistance of a second operator. The Committee has released considerable information pertinent to that plan, and in the weeks ahead, you will, of course, hear more about it.

The second project with which the Dial Interexchange Committee was charged concerns the development of an illustrative contract—including a schedule of payments—which might be used in those instances where one company converts its small manual office to unattended dial operation,—and—as the only practical means of accomplishing the conversion—calls upon a neighbor company to perform for it, those services which can be handled only by an operator. Those services, referred to as "Control Office" services, are, of course, information, assistance, handling emergency calls, and so forth.

Control Office

THE COMMITTEE is glad to report that this latter project herewith is brought to a conclusion. Its views pertinent to control office operations have been set down in a rather comprehensive report which has been printed and is available to you here today. Our presentation at this time will be limited to a brief discussion of the Control Office project with the objective of furnishing a little background information which might be helpful when you read the report and review the illustrative contract.

The premise underlying the Committee's endeavors was to develop an illustrative contract which would be bilaterally fair and reasonable. That is to say, its provisions generally must be fair to the company performing control office work for another as they are to the Community Dial Office Company for whom the work is to be performed. That, of course, is the only approach which will withstand regulatory scrutiny, should that ever become necessary, and afford continuous satisfaction to the participants. The Committee feels that its objective in this respect has been, for all practical purposes, attained.

F. E. NORRIS, vice president, General Telephone Service Corp., New York City.

Of primary interest in the Illustrative Contract is a schedule of payments. Those payments were developed as the result of studying actual experience in a number of representative Independent Company exchanges. It hardly seems necessary to tell you that the experience in some places disclosed greater costs than those shown in the Illustrative Contract, while in others, they were less. The practicability of proposing a single payment figure to apply in a given instance where one company performs control office work for another, must be tested against the effects of the probable error resulting from using "average" figures. Such tests have been made, and while it is recognized that the *percentage* error might be appreciable in some cases, the *dollars and cents value* of that error, in general, will be quite small. It is the Committee's opinion that the over or underpayment which might result from using the payment schedule in the Illustrative Contract, generally will be no more than might occur in a special study of an individual situation. This may be particularly true if the study is undertaken by someone not thoroughly familiar with separation procedures.

Notwithstanding the Committee's viewpoints in this respect, a company should undertake a special study to determine proper payments if it appears that the suggested schedule of payments in the Illustrative Contract produces unreasonable results. A brief outline of a procedure for making special studies also is included in the Committee's report.

Just one more word about the schedule of payments in the Illustrative Contract. While the schedule of payments may be reasonable in a given situation, it should be recognized that it might not cover the related operating expense in the control office until the traffic stabilizes. In other words, the volume of auxiliary services—information, assistance, and so forth—frequently is higher immediately after the cut-over than it is later on. Recognition of this fact at the outset may avoid some misunderstandings.

The maximum benefits which might be derived from a procedure whereby one company performs control office work for another can only be attained if that procedure is applied on an industry-wide basis.

In closing, one point—a quite obvious one—should be made clear. Whether a company—Independent or Bell—elects to employ the Illustrative Contract as reported by this Committee, remains a matter of its own choice. The Committee feels that the Illustrative Contract is a fair and reasonable one, completely freed of any element of "nuisance" value which so frequently in the past, has placed out of reach an arrangement whereby one company would perform control office work for another. You will find this subject more fully covered in the Committee's report previously referred to—(*Abstract of paper presented at USITA Convention.*)

What's New On Toll Compensation?

By E. M. BLAKESLEE, Chairman
USITA Toll Compensation & Settlements Committee

THIS BEING the Fiftieth Anniversary of the existence of the United States Independent Telephone Association, it seemed to me appropriate to summarize the activities and accomplishments of the Toll Compensation Committee over the past years. The committee has not been in existence anything like that length of time but it did come into being on January 2, 1936.

The committee made its first major contribution to the industry through the submission to the Board of Directors on October 10, 1939, of a 200-page report analyzing the interchanged toll traffic agreements then being offered by Associated Bell telephone companies to their respective connecting companies and making recommendations looking toward a greater recognition of the mutuality of interests of the Associated Bell telephone companies and their Independent connecting companies.

Upon the approval of and at the direction of the Board of Directors of this Association a copy was transmitted to the American Telephone and Telegraph Company for its consideration and for such disposition with its Associated Bell telephone companies as might appear appropriate. It was with considerable satisfaction that the committee was able to report at the Convention of the Association in October of 1940 that the Associated Bell telephone companies had offered to their respective Independent connecting companies new and revised traffic agreement forms which not only increased the level of compensation paid to the connecting companies but which embodied practically every principle recommended by the committee's report.

Further increases in toll compensation schedules were made in the year 1941 following a reduction in the Long Lines toll rates of some $41,000,000 per year in connection with which the Bell System agreed with the Federal Communications Commission that it would save the Independents harmless from losses which otherwise might have been occasioned by the reduction in the Long Lines toll rates.

When the Long Lines rates of the American Telephone and Telegraph Company again came under review late in the fall of 1942 through the

E. M. BLAKESLEE, president, Associated Telephone Co., Ltd., Santa Monica, Calif.

institution by the Federal Communications Commission, on its own motion, of F.C.C. Docket No. 6468, the United States Independent Telephone Association asked leave to intervene in the proceedings in the interests of its member companies.

When the issues in F.C.C. Docket No. 6468 were finally settled the Independent companies had gained new contracts containing higher compensation schedules recognizing the increase in costs in handling the toll business since the previous revision of contracts; we had established a 2 for 1 weighting of the line haul on Long Lines traffic; and the board-to-board theory of stating toll rates and compensation had been discarded for the station-to-station theory not only on the Long Lines rates but the intrastate business as well. As a result of these efforts, the Independent telephone companies had increased their participation in the joint toll business then handled by approximately $5,631,000 annually.

Further reductions in Long Lines toll rates were made effective as of July 1, 1945, and again as of February, 1946. On neither of these reductions was any arrangement made for holding harmless the Independent companies.

These two rate reductions having taken place and in the meantime wages and other costs of handling the toll business having mounted at an ever increasing rate, the committee early in 1946 again approached representatives of the American Telephone & Telegraph Company with the suggestion that an early further adjustment be made in the toll compensation schedules to recognize the increases in wages and other operating costs.

These discussions and negotiations resulted in additional payments to the Independent companies approximating $3,556,000 a year. This settlement brought about not only an increase in the Schedule B payments but it substituted a weighting factor of 1.25 on the mileage of the Independents on all traffic, both intrastate and Long Lines, for the former weighting of 2 on the Long Lines traffic only. The increase in Schedule B payments alone was $3,428,000 and normally this would have been attended by a decrease in the net prorate revenue distributed to the Independent companies of $837,000. The facts are that we were able to salvage this $837,000 and to actually increase the prorate earnings of the companies by another $128,000.

Toll Compensation Committee of the United States Independent Telephone Association will continue to work in the interests of the industry as a whole and of the small exchange in particular. Many of you will have problems in connection with the handling of interchanged toll traffic which are peculiar to your own operations and which can be disposed of only through individual treatment.

Whatever these problems may be, whether differences of opinion as to routes to be followed or questions of policy with respect to practices to be employed, it should be remembered that interchanged toll traffic, if is to be engaged in successfully, requires a harmonious relationship between the respective companies involved. Let us foster these relations and by so doing continue to make our own respective contributions to the rendering of the finest toll service in the world.—(*Abstract of paper presented during recent USITA Convention.*)

WAGE-HOUR Act Recommendations

By JOHN H. AGEE, Chairman,
USITA Employment Relations Committee

THERE ARE one or two bills before Congress which attempt to repeal the amendment which this Association was successful in adopting in 1939, which exempted operators in telephone exchanges with less than 500 stations from the provisions of the Wage Hour Act. While we do not believe the present Congress would consent to the repeal of this exemption since it knows the effect it would have upon the operation of telephone exchanges in the small communities, still it is certainly necessary to watch the progress of these bills and to ask our Congressmen to vote against them if they should be voted out of committee.

The Administrator of the Wage-Hour Act recently abolished all interpretative bulletins. This leaves us at the present time without any rules for guidance. It is our understanding that he will issue new interpretative bulletins in the immediate future. In the meantime, if you are following the old interpretations you need not be concerned about liabilities as the Portal-to-Portal Act specifically relieves you of liability if you have been operating in good faith under bulletins issued by the Wage-Hour Division. We shall expect to keep in touch with the situation in Washington, and hope that we will be called in for consultation before interpretative bulletins are issued which would affect the operation of the telephone industry.

In the printed report distributed at this convention we gave brief attention to the Labor-Management Relations Act of 1947, more commonly known as the Taft-Hartley Act. This was probably the most important piece of legistation enacted by the last Congress, at least so far as the domestic economy of this country is concerned. We believe we are therefore justified in discussing it for a few minutes today.

The Taft-Hartley Bill is the result of the attempt of the Republican Party to bring about a better understanding and provide better relations between labor and management. Let us see, then, just what this new law attempts to do.

With the permission of Mr. Ray Smethurst general counsel for the National Association of Manufacturers, I quote from a recent speech of his in which he analyzed the provisions of the Taft-Hartley Act, which has been so frequently described in recent weeks by the principal leaders in this country as being revolutionary and reactionary, a slave labor bill, a law enacted for the employer but which fails to protect the legitimate rights of management, as an anti-strike law and yet ineffective to deal with major strikes which threaten public health and safety.

JOHN H. AGEE, vice president, Lincoln (Neb.) Tel. & Tel. Co.

Mr. Smethurst states: "First, this new law incorporates no revolutionary principles or provisions." He states that the realization has steadily grown that policies originally designed to build strong labor organizations were not adequate to assure a degree of public responsibility commensurate with labor's newly acquired strength and influence.

The law introduces many changes in the structure and procedures of the National Labor Relations Board, to give greater assurance of fair and impartial administration. These changes, along with provisions restating the right of free speech, apply equally to employees, employers, and labor organizations alike.

Further analysis of the bill indicates that it is not a perfect law. In my opinion, it failed to abolish one of the most annoying situations with which most Independent companies are faced; that is, industry-wide bargaining.

I am sure that a local union knows the local situation far better than the president of a national union located in Washington or New York, and I believe that most employers would be able to deal with their employees on a fair and satisfactory basis if it were not for the intervention of a national union.

Undoubtedly everyone here has read the results of the recent poll taken by the Opinion Research Corporation. You will recall that this company took what it insists was a representative sample of American employees, white collar workers, skilled workers, factory workers, union members, non-union members, men, women, etc. They questioned employees in small companies and employees in large factories. Of all the persons interviewed, 54% said definitely that they thought Congress should not have passed the Taft-Hartley Bill. The interrogators then asked these same people for their opinions on the specific provisions of the law. 68% of the people interviewed endorsed the ten separate points of the law when they were asked whether they approved each specific part.

In other words, this survey indicates very definitely that the large majority of workers in this country do not know what the Taft-Hartley Law provides, have not read the law, or are not capable of analyzing it if they have read it.

The purpose of my talk this afternoon is to suggest that if the Taft-Hartley Law is to be given a fair trial in this country that the employer must find a way to explain it fully to his employees. We are convinced that if this law is given twelve years' trial the same as the National Labor Relations Act has had, it will prove to be a great benefit to both labor and management. Under it we should have harmonious collective bargaining.—*(Abstract of paper presented at USITA Convention.)*

PIONEERS Hold Annual Meeting;

50 Yr. Veterans Honored by USITA

THE INDEPENDENT Pioneer Telephone Association at its annual meeting on Wednesday afternoon preceding the banquet elected as president for next year, R. C. Reno, editor of Telephony, who has a wide popularity in the Independent Telephone industry. The new vice presidents gave a brief and interesting summary of the pioneer organization's activities during the past year.

The presentation of certificates of honorary membership to 39 half-century veterans of the Independent telephone business, including one from Hawaii, was a highlight of the closing day's session on Thursday. USITA President Lumpkin in presenting the honorary membership certificates stated that the associations program committee and officers had been unanimous in the recognition of the persons through honorary membership. "A half century of service speaks volumes of eloquence," Mr. Lumpkin said, "in praise of those who have devoted that period of time to what has been called the magic art of speeding the messages of mankind in the business and social life of our country."

Copperweld executives Bill Ege and Bill McIlvane distribute Gay 90's accessories to USITA visitors.

NOTICE

DUE TO successful efforts of Editor RAY W. SMITH to make a complete photographic record of USITA's Golden Jubilee Convention and inclusion of the photos in this Convention Report Issue of TELEPHONE ENGINEER and MANAGEMENT, it was necessary to omit papers presented by HAROLD V. BOZELL and Major General MANTON S. EDDY. These papers, scheduled for pages 52 and 61 respectively, will be presented in a future issue.

are: J. I. Kennedy, president of the Northwestern Telephone Co., Freeport, Ill., and Carl E. Brorein, president of the Penninsular Telephone Co., Tampa, Fla.

The appointment of Mayme Workman to the post of Association secretary was also unanimously approved by Association members. Walter Dakin, the retiring pioneer president, who heads the Commonwealth Telephone Co., Madison, Wis., Colonel W. C. Henry presented the Board's motion for the honorary membership and his resolution noted that the USITA membership wished "to pay homage and respect to the loyalty and fidelity to Independent telephony" of the persons who have spent half a century or more in the service. The Balch Pioneer Chapter, through the officials of the Mutual Telephone Co. of Hawaii, presented each honorary membership recipient with a traditional Hawaiian lei.

Tom A. Boyd, New York, C. S. Cadwell, Chicago, Fred E. Norris, New York, and Thomas A. Osborne, Santa Monica, pause for T.E.&M. camera.

Interest in various exhibits at USITA convention was high; drew record crowds to view new, improved items and obtain product information.

Special Departmental Conferences Present IMPORTANT Discussions

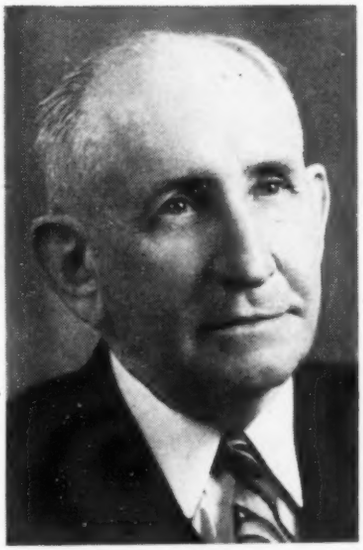
AN OVERFLOW crowd was attracted to the USITA Commercial Conference conducted on Tuesday morning under the chairmanship of R. B. Still, president of the Illinois Telephone Company, Bloomington. The commercial committee, consisting of Mr. Still, V. B. Clark, Pekin, Ill.; Ray Dalton, Everett, Washington; R. F. Lucier, Warsaw, Indiana; C. C. Pearce, Riceville, Iowa; H. W. Pike, Madison, Wisconsin; and J. E. Wyckoff, Rochester, New York, chose as material for the conference discussions, subjects related to the essential detail of getting revenue sufficient to pay the costs of labor, materials, equipment, etc., necessary to a company's operation.

The Commercial Committee urged continued support of the Rural Telephone Service Committee, and further study of rural territory. It stated that "the slackening of our efforts to fulfill our obligation in this respect will, we think, be against our own interests." The committee also recommended that consideration be given during the coming fiscal year to: (1) Rate case handling; (2) proper shaping of base-rate areas; and (3) public and semi-public telephone development.

H. W. Pike, Madison, Wisconsin, in his discussion of "Tariffs and Tariff Filings" outlined a few of the advantages of filed tariffs. "Probably," he said, "the most persuasive reason is that when the rules and regulations are reduced to typed or printed form, the management and supervisory employees are relieved from repeatedly deciding numerous questions, because the answers to many of the important questions are in the tariffs and available to employees who need the answers."

Mr. Pike urged the representatives of those companies which did not have complete tariffs to get all of their rates, rules and regulations into written form and to study the filed tariffs of other companies. Commenting on toll tariff he stated that most of the Independent companies use Bell System toll rates except where there may be a few special toll rates in effect which are different from the standard Bell rates.

"Accordingly," he said, "the most practical method of handling toll rates is to state that the company concurs in the toll rates established by whatever Bell System company is operating in its state, and then if there are some special or non-standard rates, indicate that such rates are shown elsewhere, either in the toll tariff or in connection with the rates for individual exchanges."



R. B. STILL, president, Illinois Telephone Co., Bloomington, Ill.

Mr. Pike described some of the uniform provisions which experience shows are desirable for inclusion in the general exchange tariff, either by a new filing, or by supplement or amendment as: Initial contract periods; application of business and residence rates at various locations; directory listings; use of service and facilities; telephone numbers; telephone directories; service stations; overtime work or interruptions of work by customers; disconnection for unreasonable interference; profane or indecent language.

The discussion of Ray Dalton, vice president and general manager, West Coast Telephone Company, Everett, Washington, dealt with "Collection Practices and Employee Education." Mr. Dalton stated that the industry is gaining subscribers at a very rapid rate and knows very little of the subscribers' credit rating and responsibilities.

Mr. Dalton recommended that companies should carefully analyze collection practices and problems to ensure the existence and proper functioning of the following: (1) A revised standardized method of dealing with delinquent accounts from the first notice to final disconnection of service; (2) classification of subscribers by various credit ratings; (3) publicity to the extent necessary to acquaint the public as well as our own employees, with our methods and the reasons for them; and (4) adequate training.

Verne Clark, Pekin, Illinois, during his discussion of "The Need Of Independent Companies For Adequate Rates," stated. "It seems to be the general opinion among leaders in our industry that if we take history as our teacher and just everyday common horse sense as our guide in analyzing today's demands for service, there is little to console those who may still hold a hope that these two major readjustments are not necessary—that we can continue to go along with exactly the same layout of telephone plant and equipment, the same operating methods, or the same telephone rates and income."

Mr. Clark stated that although it may be concluded that telephone service is truly the cheapest thing in the world, it is problematical that this tradition may be the greatest obstacle in the path of an industry which is expected to accomplish and is accomplishing miracles of expansion and improvement. "As there is more widespread use of communication in the more largely populated areas," he said, "it seems logical to believe that there will be more demand for good telephone connection with the smaller communities and areas where people have been more indifferent as to quality of service and as to the welfare of their telephone plants—in other words where they have been indifferent as to whether the rates they paid would improve the telephone service or starve it into oblivion."

Mr. Clark commended the telephone industry publications for their reproduction of special articles. "The Commercial Committee," he stated, "was unanimously of the opinion that the files of the industry publications contained so much material

valuable to those who will join in a united front to meet the problem of improving and modernizing plants, service, rates and financial conditions, that it has been suggested to the publishers that they present lists of articles bearing upon the small exchange problems, especially the need for adequate rates.

"Each and every issue of our excellent industry publications constitutes a most valuable source of information and education for almost anyone engaged in the telephone work in either large or small exchanges, and the lists provided are by no means inclusive of any considerable amount of the excellent articles that have appeared which would be helpful in solving the problem of securing adequate rates. These lists which are available will be helpful in the preparation for rate cases."

At the conclusion of Mr. Clark's address, J. G. Hardy, secretary of the Illinois Telephone Association, and George W. Annan, a member of the Illinois Telephone Association staff, reviewed several rate cases that they have helped prepare for members of the Illinois association.

The Commercial Conference concluded with the presentation of the Advertising Committee report by C. C. Pearce, Riceville, Iowa.

Accountants Review New Methods

HAROLD WHITE, Jamestown, New York, presided at the Accounting Conference on Tuesday afternoon, October 14, and presented F. Merrill Beatty, of the Arthur Anderson Company, New York City, Thomas A. Boyd, and Ranford Dunlap, Chicago.

During his discussion of "The Implications of Original Cost," Mr. Beatty dealt with two vital problems: (1) How does original cost accounting affect financial statements? and (2) What is the effect of the original cost principal in the regulation of rates?

"The imposition of the original cost requirement has," he stated, "raised considerable argument as to its merits and its lack of merit. Perhaps more heat than light has been generated in the flood of arguments pro and con over the original cost requirement. As one writer has so clearly pointed out, much of the real issue has been obscured by extending the argument to matters involved with the determination of cost, not merely original cost. Among other things there are differences of opinion regarding reaccounting for overheads, intercompany profits, affiliated

RANFORD DUNLAP, chairman USITA Accounting Committee.

company service fees and the cost allocations to be made when a mixed aggregate of property is acquired for securities."

Mr. Beatty stated that in his opinion there is no accounting principle requiring the determination of original cost of property when first devoted to public service. "Accounting," he said, "generally is based on cost to the present company and such costs should be accounted for properly to determine a fair presentation of financial position and results of operations. There can be no accounting objections to the determination of original cost if required by regulatory commissions. This segregation of cost between original cost and cost in addition to original cost does not violate generally accepted accounting principles. The accounting problems and difficulties have arisen from the programs adopted or required for the depreciation, amortization or other disposition of the amounts included in the plant acquisition adjustment accounts."

Commenting upon the "net prudent investment theory" which has become so popular with some commissions, Mr. Beatty presented an example of a "prudent investment rate base and stated it gives no consideration to changes in price levels.

"Many argue," he said, "that an injustice in the base can be compensated for in the rate of return, and I believe it could be. But are companies getting such compensation when net prudent investment is the base and a present day cost of money supports the fair rate of return? Such a policy, it seems to me, sets the economics of utilities in a field of its own, apart from the economics of the rest of the industry in the country."

Thomas A. Boyd in his report on "How to Read a Balance Sheet," stated that the largest and most important reserve is the depreciation reserve. "This," he said, "is the reserve provided by the company to compensate it for the loss in value of plant used up in the business through wear and tear, inadequacy and obsolescence. In general, in the telephone industry, the reserve is computed on a straight line basis. In other words the service lives of various classes of plant are estimated and the cost less estimated salvage value is amortized by charges against earnings over the service life in equal monthly amounts."

Mr. Boyd stated that before the war, depreciation reserves of Independent telephone companies amounted usually to from 20 to 30 per cent of depreciable plant with the average somewhere around 25 per cent. Ruring the war the depreciation reserve to plant increased substantially, in some cases to as much as 40% and more. These reserves are being reduced now and probably will be reduced substantially in the next few years by the tremendous plant replacements now being made.

Following presentation of the Accounting Committee Report by Ranford Dunlap, an open forum discussion covered the following subjects: Transition to Rotation Billing; contributions in aid of construction; accounting mechanics of pension plans.

Traffic Dept. Heads Study Training Plans

TRAFFIC COMMITTEE Chairman W. A. Kern, presided over the Traffic Conference on Tuesday afternoon and opened the session with an interesting address on "Traffic Department Functions—Past, Present, Future.

Mr. Kern stated that the fine uniform practices and techniques which have come down through the years, "just didn't happen."

"They were the result of hard work and endless patience on the part of those who came before us," he said. "We owe a great deal to those women in their white shirt-waists and the men with the handle-bar mustaches who established the fine traditions that are ours to maintain today."

Commenting that never in history have traffic people been called upon to render telephone service under more trying conditions, Mr. Kern described today's task as "two-fold" and recommended that each company

have *all* the needed equipment on order with its supplier.

"The best traffic department on earth," he said, "can't give proper service with inadequate equipment. I am referring chiefly to switchboard equipment, but good service can't be rendered with overloaded toll circuits and rural lines either, so make sure your company is doing all that it can to make your future and the customer's, a bright one."

Mr. Kern covered the importance of maintaining the moral of present operating forces as high as is humanly possible.

"It is not a pleasant task," he said, "for an employee to operate an overloaded switchboard. Recognize this, and bend every effort to make the work as attractive as possible. It has been my observation that an operating force reflects the attitude of the supervisor in charge. If he, or she, hasn't the proper balance and viewpoint, then the office is definitely in trouble. Hold frequent meetings with your supervisors to keep them pepped up. Point out that our future is bright and these shortages which plague us today, will be eased considerably in a relatively short time."

In closing Mr. Kern stated: "We will again be able to attend to the service refinements which have so largely disappeared from the scene but which, prior to the war, made up the pleasant, friendly aspects of our business. The well-trained voice with the smile; the courteous attitude which made the telephone operator the leader in the field. These are the things that the future will bring back in abundance to us. I am particularly looking forward to the day when proper supervision and training can be given to the employees who were taken into the organizations since 1942. This unfortunate generation has spent its entire adult life in this hectic war-caused atmosphere of equipment and personnel shortages and know little or nothing about how the Traffic Department functions in normal times."

Following Mr. Kern's report, Mr. R. I. Mabbs, traffic facilities engineer of the American Telephone & Telegraph Co., New York City presented a progress report on "Nationwide Operator Toll Dialing." Mr. Mabbs stated that operator toll dialing is a very promising development for toll telephone service. "Equipment that will do the job," he stated, "costs about the same as other types of dial equipment."

He emphasized that although equipment is not available in quantity at the present, it takes about the same

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time to manufacture and install. Once installed its effect on service is immediately noticeable.

"Those of you who have seen the equipment," Mr. Mabbs said, "are no doubt well aware of its greater speed in handling direct circuit calls. You may have noticed, too, that switched calls may be put through almost as quickly as the direct circuit call."

Mr. Mabbs stated that there were many engineering problems involved in the introduction of operator toll dialing. However, he added, the program is progressing satisfactorily on an industry-wide basis, and now more than five per cent of the country's toll board traffic is handled by this method. Once the material scarcities are overcome and enough time has elapsed to permit more of this equipment to be installed, telephone customers are going to be greatly pleased with the speed and accuracy with which their calls are handled.

L. E. Armfield, personnel director, East Central Group of operating companies, General Telephone System, brought the conference group up-to-date on the scientific selection of new employees. He stated that the term scientific method is usually defined as a way of arriving at truth and involves the following steps: (1) Formation of a desire to find out; (2) collection of facts concerned through observation of nature or by means of planned experiments; (3) finding of some rule or law, which is true for all cases observed; (4) making of an hypothesis (scientific guess) which seems to explain the law; (5) use of the hypothesis in planning new observations and new experiments for testing further the truth of the hypothesis, and (6) use of the fruit of experience and knowledge thus obtained.

Following a timely discussion on "Indoctrinating The New Employee," presented by Ralph Beck, the Mutual Telephone Company of Hawaii presented "Behind The Dial," a moving picture in color and sound. This final feature of the traffic conference proved exceptionally popular and representatives of the Mutual company were highly commended for making the film available for the conference.

Plant Conference Studies Mobile Service

THE PLANT Conference, under the chairmanship of L. W. Hill, president of Carolina Telephone & Telegraph Co., Tarboro, N. C., reflected interest of the Independent

L. W. HILL, president, Carolina T. & T. Co., Tarboro, N. C.

try in mobile radio telephone developments. E. H. B. Bartelink, systems radio engineer of General Telephone System, New York City, brought attention to current delays in allocation of frequencies and the apparent non-recognition to-date of the imperative requirements of telephone companies.

The FCC "holds the key which can unlock the door leading" to many uses of radiotelephone in mobile vehicular service and in linking the remote areas and communities to the nationwide telephone network, Mr. Bartelink declared. "Unfortunately, the FCC has thus far shown little indication that they recognize the pressing need for frequencies by telephone companies," he added.

He cited that the FCC, while granting television 12 full channels of six megacycles each, even though television has not yet been fully proven in as requiring this large spectrum space, has not given consideration to the telephone industry where the known demand indicates a need for about five to 10 times more frequency allotments than the present small assignment of three-fourths of one megacycle in the smaller cities and rural areas and 30 times larger in the urban areas. The Commission, he noted, has not yet given any decisions regarding policies on the mobile radiotelephone service, having postponed these proceedings three times since last summer so that now the hearing date is fixed for December 8.

Telephone companies under full FCC regulation, too, face the entrance of private organizations conducting mobile radiotelephone services which will only be regulated by the governmental agency in a very limited way, he said. This could mean that the concerns with limited regulation can pick only favorable locations and, if the operations prove unprofitable, can cease their service (without FCC action). Telephone companies are forced to continue telephone service, even if unprofitable unless given specific permission to discontinue it by the regulatory bodies, Mr. Bartelink emphasized.

Preceding the report of Mr. Bartelink, Chairman Hill presented the Plant Committee report in his capacity as committee chairman and discussed the joint use of pole lines for power and telephone services. Mr. Hill cited that the joint use was not a new idea, having been employed before in 1890 and that today there are more than 6 million poles used jointly by power and telephone organizations in the United States. The great bulk of these poles, he noted, are located in urban areas where voltages of power circuits are generally less than 5,000 volts and the span lengths do not exceed about 150 feet.

As power and telephone lines were extended into rural territory, he told the conference, new problems have

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OTHER COFFING PRODUCTS: Safety-Pull Hoists; Hoist-Jacks; Load Binders; Differential Chain Hoists; Electric Hoists; Spur Geared Chain Hoists; Trolleys; Special Utility Maintenance Tools.

COFFING HOIST COMPANY

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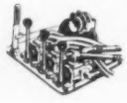
FAST, ACCURATE HOLES AT LESS COST!

JAQUES

EARTH BORING MACHINE

Automatic Plumbing

Hydraulic Control



With finger-tip controls, this amazing machine performs with ease and speed. Mounted on steel skids, it is easily attached to and removed from truck or other conveyance. Has its own 100 H.P. engine and a wide assortment of augers and reamers. Can bore a 20" hole 9' deep in two minutes. Bores vertical or angular holes up to 48" diameter. Working weight, 3,440 lbs. Pole-setting derrick is optional equipment. Write for literature and prices.

Bottom Hole Reamers

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been encountered in the use of longer spans and higher voltages for power circuits, which has often increased noise induction. However, progress in the art through cooperation of the telephone industry with the Edison Electric Institute and the Rural Electrification Administration has brought about developments which now make long span high voltage rural joint use feasible where conditions are favorable, he said.

Joint Use of Pole Lines

THE SUBJECT of joint use of pole lines requires much time and effort, he pointed out, and the Plant Committee of USITA wants to present a complete report so a final survey by his body could not be submitted at the Chicago meeting. He summarized the participation of the Plant Subcommittee in cooperating with the American Standards Association on standardization of wood poles at a meeting held Oct. 2-3. Mr. Hill's committee members are: F. E. Behm, Ray Blain, B. C. Burden, C. E. Jones, G. W. Miller, F. M. Parsons, O. R. Roach and A. A. Wilson.

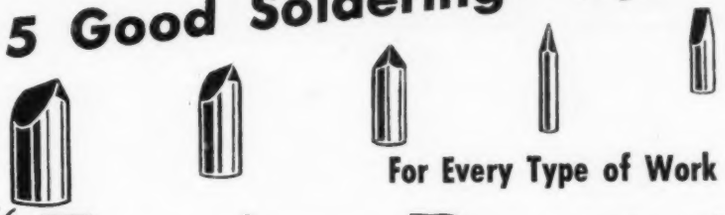
In the discussions which followed presentations of the Plant Committee Report by Chairman Hill, the report of the Radio Service Committee by F. E. Norris, and Mr. Bartelink's paper, many questions were asked from the floor concerning the forthcoming FCC hearing on allocation of frequencies to the various classes of non-governmental radio service.

Radio Hearings

USITA will be represented by B. C. Burden, Lincoln, Nebraska. USITA is planning to present testimony for the purpose of showing the extent to which Independent companies are already providing mobile radio telephone service, the advantages to the public of providing such service on a common carrier basis, and the conservation of the radio spectrum that will result from frequency assignments to telephone common carriers.

Mr. Bartelink, Mr. Bozell, Mr. Norris, and B. L. Fisher, Martinsville, Va., emphasized that the importance of the FCC hearing scheduled Dec. 8, demands that Independent telephone companies be represented. Certain individual companies are now planing to make appearances in their own behalf and the report of the Radio Service Committee stated that, "It is not too late for others to make appearances at this hearing and the Radio Service Committee will be glad to be of such service as it can in assisting anyone interested."

5 Good Soldering "Tips"



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NOTICE

If you missed our demonstration at USITA's Chicago meeting, be sure to write for particulars on the New - Improved, Low - Cost Hole Digger.

•

THE ECONOMY DIGGER
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(Continued from page 43)

tion 1. The affairs of this association shall be managed by a board of thirty six (36) Directors, each of whom shall be financially interested in or an officer of or employed by an active member company as described in Section 3 of Article IV hereof."

The National Scene

IN ADDITION to the appearance of Independent leaders as speakers during the three-day convention program, the business and economic aspects of modern life were ably discussed by: James E. McCarthy, Dean of the College of Commerce of Notre Dame University; Major General Manton S. Eddy, Chief of Information, War Department; and Fred G. Clark, General Chairman of the American Economic Foundation.

The afternoon session on October 15 was highlighted by the appearance of Keith S. McHugh, vice president of the American Telephone & Telegraph Company, New York City. At the first general session on October 16, Dr. Frank B. Jewett, past president of National Academy of Science and retired president of the Bell Telephone Laboratories reviewed "Fifty Years of Telephone Development." Abstracts of the papers presented by Mr. McHugh and Dr. Jewett appear in this issue.

Independents Receive Birthday Congratulations

FOREMOST among the pre-convention activities was the salute accorded the Independent telephone industry on October 13 by the Bell System during its nationally broadcast "Telephone Hour." President R. A. Lumpkin, Mattoon, Illinois, in his address at the first general session on October 15, expressed the sincere appreciation of all members of the Independent telephone industry for "the graciousness of the Bell System in saluting our industry segment on the 'Telephone Hour.'" Mr. Lumpkin stated that to "transport this program to our convention city, to provide for this occasion performers unexcelled in the concert world was an undertaking of tremendous magnitude. The perfection with which it was accomplished bespeaks again the imagination, the resourcefulness, the aggressiveness that is so properly characteristic of our Bell System friends. It would have been difficult to conceive a more adequate contribution to this our Golden Jubilee Convention."

President Truman, in a letter to the USITA, congratulated the more than 6,000 Independent telephone companies for their half century of service to the public, and wrote that it is "generally recognized that the United States leads the world in the development and use of communication facilities."

USITA also received congratulatory messages from General Dwight Eisenhower, Major General S. B. Akin, Chief Signal Officer of the Army; Rear Admiral Earl E. Stone, Chief of Naval Communications; Captain D. E. McKay, Chief of the U. S. Coast Guard Communication; Joseph L. Egan, president of Western Union Telegraph Company; Brig. Gen. David Sarnoff, president of the Radio Corporation of America, and Frank Stanton, president of the Columbia Broadcasting System.

USITA Honors 50-Year Independent Pioneers

IN A BEAUTIFUL ceremony which featured the last session on Thursday October 16, 39 half-century veterans of the Independent telephone industry were awarded certificates of honorary membership in the United States Independent Telephone Association. Prior to the presentation, Colonel Wm. C. Henry, Bellevue, Ohio, presented the Board's motion for the honorary membership. Mr. Henry's reading of the motion will be long remembered as one of the most stirring motions ever read to association members. The words properly represented the feelings of Mr. Henry and the entire USITA membership toward the veterans.

At the close of the 50th Anniversary Convention of the United States Independent Telephone Association on October 16 it was unanimously agreed that the Independent Telephone industry will make for itself even a greater record in the years to come than it has in the years that are now behind. THE END

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is pre-tested to operating company requirements

The construction or maintenance engineer judges telephone cable on three points:

1. Efficiency of transmission
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Kennecott knows this and, before a foot of cable leaves its mill, subjects it to five critical tests:

1. Dielectric Strength
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5. Fixed Dimensions

These are everyday specifications. In addition, Kennecott's staff of electrical engineers works constantly to increase the efficiency of its products.

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for long spans *specify armstrong's glass insulators*

Tests in both field and laboratory have demonstrated that Armstrong's Glass Insulators are actually *stronger than their supporting pins!* This means that Armstrong's Glass Insulators can be used on the longest practicable spans.

Manufactured by automatic precision machinery, these Insulators are checked every step of the way. From batch materials to finished product, they are under rigid chemical, microscopic, and polariscopic control to insure highest physical and electrical properties.

For the finest in glass insulators, specify Armstrong's—used by leading communication systems throughout the world.

They conform to—or exceed—A.S.T.M. standards

. . . the Cook type XB unprotected

cable terminal

These exclusive features add up to easy installation—less maintenance—long service:

1. All steel parts are made of Toncan Iron, formed, assembled and hot-dip galvanized.
2. Non-corroding Everdur studs with tinned solder shoulders.
3. Single piece molded Bakelite faceplate and fanning strip with raised stud mountings that increase insulation resistance.
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5. Patented cable entrance and cable holding sleeve provide secure and tight cable joint.
6. Heavy reversible zinc hood permits mounting with stub at either top or bottom.
7. Supplied with or without cable stub.

In 6, 11, 16, and 26 pair sizes

for added safety . . . specify

chance pike poles!

The new Chance Reversible Point Pike Pole features a removable point, made in a separate piece, flat on one end with a gimlet point on the other. A spring catch in the ferrule holds the point in place.

When carrying the pole on the truck, the point is inserted point-first into the ferrule, thus eliminating the hazard of sharp projections.

The gimlet or spiral point holds without slipping. When worn, it can easily be replaced without buying a complete new pike pole. Pole splitting under strain is greatly reduced through the means by which the ferrule is attached to the pole. The base of the pole is also protected by a pole band.

Chance Pike Poles are made of Douglas or Western Fir, free from all defects and lacquer finished. The ferrule is high-grade malleable iron, the removable point of steel, heat-treated. Ferrule and pike are available separately.

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Signal Corps Announce "Trial" Affiliated Reserve Units

An understanding has been reached between several major organizations in the communications and manufacturing industry and Major General Spencer B. Akin, Chief Signal Officer, under which these organizations will cooperate in the formation of selected "trial" units in the Affiliated Signal Corps Reserve, the War Department has annnouced.

The participating agencies are the American Telephone & Telegraph Company, the General Electric Company, the Graybar Electric Company, the International Telephone & Telegraph Corporation, the Radio Corporation of America and the United States Independent Telephone Association.

Experience with the proposed trial units is expected to serve industry as a guide in the expansion of the affiliation program and to aid in determining the numbers, types and locations of the many additional units contemplated by the Signal Corps.

The affiliation plan is not new, since in both World Wars business and industrial concerns sponsored various types of affiliated units. In the Signal Corps alone 295 such units were activated for communications and related assignments. A majority of these units served overseas and made notable records. A new factor in the present plan, however, is the coupling on a major scale of the affiliation program with the Organized Reserve Corps.

Under this program special service type units will be trained for any future emergency with a minimum waste of time, effort and manpower and technically qualified personnel will be utilized in assignments similar to those performed in civilian life.

"Generally, these new trial units are to be located in the First Army Area," General Akin said, "so that they will be near the home offices of the companies concerned, and so that top officials can keep in close touch with their progress."

It is anticipated that most of the trial units will be activated by September 30 of this year. They will be selected by the organizations concerned as representative of the units they ultimately expect to sponsor in the overall Signal Corps program.

The sponsorship of a majority of a number of photographic units proposed under the affiliation program is now under study by the Academy of Motion Picture Arts and Sciences, the Motion Picture Association of America and the Society of Independent Motion Picture Producers.

◆

C. F. Mason Honored at "King-Size" Surprise Party

A tribute to C. F. Mason, chairman of the board of directors of Associated Telephone Company, Ltd., Santa Monica, Calif., in the form of a king-sized surprise party was sponsored by the employees of the company August 29, in honor of his retirement from active service in accordance with the company's pension plan.

Greeted with calls of "surprise" and strains of "For He's a Jolly Good Fellow," Mr. Mason entered the banquet room of the Brentwood Country Club in Santa Monica at 8 o'clock. Preparations had been made for months in advance of the affair, but no word of it had reached Mr. Mason's ears, and as he entered the room and saw almost 400 of his fellow employees rise to their feet, he was completely astounded.

Drafted as master of ceremonies by the employee committee, Vice President Harlan W. Holmwood welcomed Mr. Mason to the gathering, saying: "Several months ago Mr. Mason told me that he wanted no party or demonstration of any kind when the date for his retirement came. Only a few weeks ago he again told me that he wanted no attention called to his retirement and that if I should hear of any plans for a party for

(*Please turn to page* 78)

"But the first thing we'll do..."

"Talk about new ideas—the boss was bubbling with them when he got back from the Convention.

"Better equipment control . . . improved maintenance methods . . . a new system of cost accounting . . . honestly, he laid out a year's program the first ten minutes he was back.

" 'But,' he announced, 'the ***first*** thing we're going to do is get Loomis in here to handle our advertising! I talked to a lot of executives who've turned their advertising over to Loomis and it's the same story every time—increased revenue—better public relations—a smoother operation all the way down the line. Believe me—we're going to get in on that ***now!***' "

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If they have to shout like this over your lines...

MAYBE YOU OUGHT TO INSTALL

USS AMERTEL 135

AMERTEL 135 has much better voice transmission characteristics than the old steel telephone wire—and it has lower electrical resistance, too. So when you replace your present lines, or install new ones, try Amertel.

Not only will your customers hear better, but you will save money on installation costs, for Amertel 135 can be put up in spans *double* the length of the standard BB wire. Some companies report savings as high as 30% of construction costs.

When Amertel is used with PFT Preformed Armor Rods, further protection is offered against breaks. Armor rods dampen vibration effectively . . . protect the wire at the support points . . . reduce outages caused by wind and sleet. Write for complete information about U·S·S Amertel and PFT Armor Rods.

American Steel & Wire Company

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Columbia Steel Company, San Francisco,
Pacific Coast Distributors
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Birmingham, *Southern Distributors*
United States Steel Export Company, New York

UNITED STATES STEEL

Look for this tag

It is your assurance of highest quality wire.

AMERICAN STEEL & WIRE COMPANY
USS Amertel
TELEPHONE AND TELEGRAPH WIRE
UNITED STATES STEEL

THE NEW TURNER

Low Pressure FIRE POT

NEW IN PRINCIPLE, DESIGN, AND PERFORMANCE

WITH "CARBURETOR CONTROL"

Features the exclusive *adjustable* air syphoning tube which enables the pot to operate at a pressure of only 20 to 30 pounds as compared with 40 to 60 pounds for old style models. Tube can be moved back and forth in the burner . . . permits instant balancing of the gas and air mixture by actually syphoning air from the outside to meet widely varying fuel and job conditions. Important because it means more perfect combustion . . . a more intense flame, concentrated at the proper point and not distributed over the entire coil . . . eliminates carbonization . . . insures longer coil life!

Turner No. 275 Fire Pot will melt 20 pounds of lead in 3 minutes; has fuel capacity of 9 pints; takes 6″ melting pot.

COMPARE THESE FEATURES

Flame control valve adjusts the flame to any desired heat . . . is complete with stainless steel orifice cleaner needle which automatically cleans the orifice thereby eliminating need for separate cleaner wire.

★

Construction assembly permits quick, easy accessibility and cleaning . . . windshield, top plate, and bail handle are one unit, and can be lifted from tank in five seconds by loosening one wing nut. This construction also provides the sturdy support necessary to carry a heavily loaded pot of lead, and is far superior to the old style upright posts.

★

Burner coil is made of extra-heavy seamless steel tubing . . . is protected by sturdy outer jacket that maintains heat without overheating . . . can be generated and used in heavy wind.

★

Tank is of unusually strong construction . . . has heavy protector ring on bottom, large funnel-filler cup, new style wide-seat filler plug and protective dust cap, large drip cup and an overflow cup, heavy blow-proof brass pump.

Made by the manufacturers of the nationally known line of Turner Blow Torches.

THE TURNER BRASS WORKS

SYCAMORE ILLINOIS

Since 1871

Officers and members of the board of directors of Associated Telephone Company, Ltd. (Left to right): George Jones, member of the board; Edwin C. Blakeslee, president; Harlan W. Holmwood, vice president; Robert E. Easton, member of the board, and C. F. Mason, chairman of the board.

him he wanted me to put a stop to those plans. As a matter of fact he was very emphatic on the subject.

"I should like to tell Mr. Mason now that the plans for this party started brewing about the first of July and that it would have been easier for me to stop the tides of the mighty Pacific Ocean than to stop the plans for this party. This party, Mr. Mason, is the result of the desire of all the people of the organization, and not even you, yourself, could have stopped it, much less I."

In tribute to the early days, Mr. Holmwood introduced old timers who were with the old Santa Monica Company when Mr. Mason took it over. He also introduced other honored guests of the occasion, 16 retired employees who were seated at the head table.

The next speaker was President Edwin M. Blakeslee, who began, "We are gathered here to pay homage to Mr. Charles F. Mason, better known to us, his associates, as Charlie. But the highest tribute that I can pay Charlie Mason is that here tonight on this occasion it is not necessary that I eulogize him to this group. His splendid leadership and his devotion to the interest of every one of us is too well known."

In a short speech, R. E. Easton, a member of the board of directors, spoke of the famed "Mason smile." He said it was known in the telephone industry from one end of the country to another.

Invited guests, pensioners, and members of the Board of Directors who were unable to attend the party sent letters, toasts, and telegrams to Mr. Mason, expressing their regard for him. Following the reading of several of these, Mr. Holmwood introduced Ted Hunter, an old time telephone man of more than 30 years, who made the presentations to the guest of honor of an engraved wristwatch and album. The Mathey Tissot watch indicates, in addition to the time of day, the day of the week, date of the month, month, and year, as well as the phases of the moon.

Photographs in the 100-page album, compiled by employees, are mounted on Belgian parchment, while the goatskin binding and inside fly leaves were imported from France. The book contains a photographic record of events from the time the Associated Company was formed in 1929 until the present time. It is decorated with colorful illustrations, and contains a hand-colored map of the company territory and the dates of acquisitions. It also contains full-page charts of personnel increase and station growth. The last 20 pages are devoted to signatures of all of the employees in the company.

Speaking extemporaneously, Mr. Mason expressed his appreciation to the assembly for the party and gifts. He reminisced with some of the old timers about bygone incidents, and gave fitting tributes to Mr. Blakeslee and Mr. Holmwood. "The beautiful watch and wonderful album and the thoughts which prompted you to present them to me, mean more to me than anything in the world," he told employees.

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longer spans, better conductivity, and lower maintenance with

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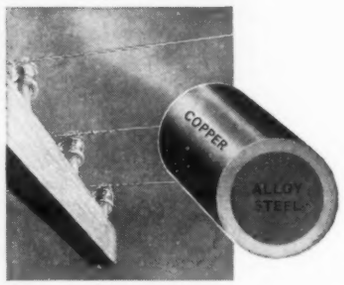

Pliable, easily handled, light in weight, economical in cost —only Copperweld combines the high strength and ruggedness of steel with the conductivity and permanence of copper.

Copperweld has the best electrical conductance of any high-strength conductor—is 2 to 3 times stronger than hard-drawn copper wire—has greater tensile strength than any wire of comparable properties.

Its permanent protection against rust means lower maintenance costs, plus good transmission for voice and carrier frequencies during the life of the installation.

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sub-cycle ... *Superior Ringing Converter*

The Sub-Cycle "Master" Ringing Converter provides a powerful ringing current entirely independent of frequency variations in the commercial power supply.

Economical and quiet in operation, this exclusive development in an *alternating current* Power Ringing Converter causes no radio reception interference. There are no moving parts, and nothing to lubricate. Thus, the "Master" requires no routine maintenance. It is available in several models suitable for every use from P.B.X.'s to large central offices, requiring outputs of 7½ to 45 watts.

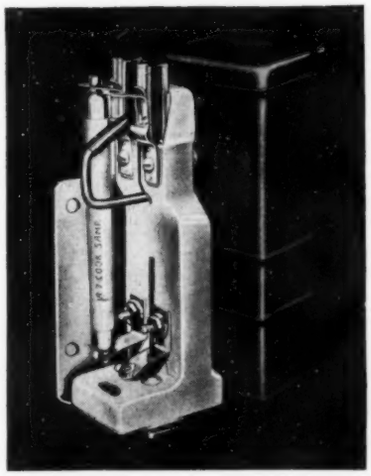
MASTER

"THE CHOICE OF THE TELEPHONE INDUSTRY"

cook type 0 *sub-station protector*

This single circuit protector, equipped with fuses and lightning arresters, is unexcelled for either indoor or outdoor use. Special Cook-engineered features include:

1. Heavy white glazed porcelain designed to prevent surface leakage between current-carrying parts.
2. Tru-Gap high-potential dischargers that will not ground the line.
3. Phosphor bronze fuse and arrester springs, zinc hood, Everdur studs and washers. Hood is grounded when in place.
4. Choice of types and lengths of Cook Telephone Fuses.



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dependable...in any weather!

No matter how fierce the attacks of summer heat or winter cold, you can count on famous Hemingray Insulators to stand up to the job.

Neither rain nor snow, sleet nor hail keep them from giving dependable service. Favorably known since 1870, these insulators are products of Hemingray Division of Owens-Illinois and are manufactured under their rigid laboratory inspection.

Many of these insulators are in service today after 20, 30—and even 50 years. The installation cost is low—but with Hemingrays the cost in service life is even lower.

Hemingray No. 10: The exchange line pony with double groove. Standard on many telephone lines the world over.

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in Telephone Wires means *Economy*

Neoprene Means Endurance Plus!

Neoprene jacketed drop wires are a proven superior product, and will greatly increase life of your installations.

NEOPRENE has:

- **Greater abrasion resistance**
- **Best weathering characteristics in all climates**
- **Freedom from fraying and rot**
- **Flexibility at all temperatures**
- **Very high tensile strength**
- **Positive resistance to oil and chemicals**

Parallel Drop Wire

Twisted Pair Drop Wire

OUTSIDE WIRES—Drop, bridle and free—sizes 14 to 20—B&S, bronze, copper and iron conductors, rubber insulated, cotton braided.

INSIDE WIRES—Sizes 19 and 22—B&S with rubber insulation, cotton braided or plastic insulated.

Samples of Neoprene drop and bridle wire are available—wire or write today.

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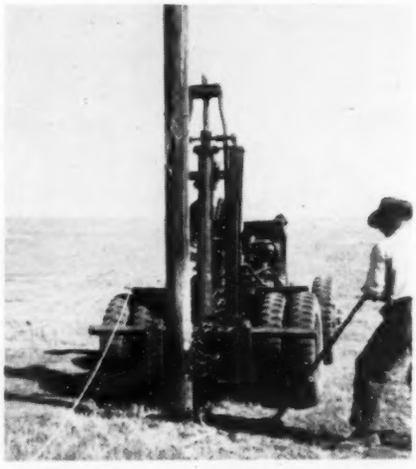
Unique Plan For Pole Line Removal

The Dos Palos (Calif.) Telephone Co., Inc. recently used a unique system to remove substantial portions of pole line, that should be of value to other companies.

According to Richard D. Crowe, secretary, the problem came about through the purchase of an abandoned line from



Dos Palos (Calif.) Telephone Co. used hydraulic lift to remove 370 25 ft. poles in 5½ days.

the Army; Since the sale was conditioned upon the line's removal within a certain time limit and the bid was competitive the company was forced to find the quickest and cheapest way to pull the poles out of the ground.

With the cooperation of a local manufacturer of farm machinery the company obtained the use of a hydraulic lift.

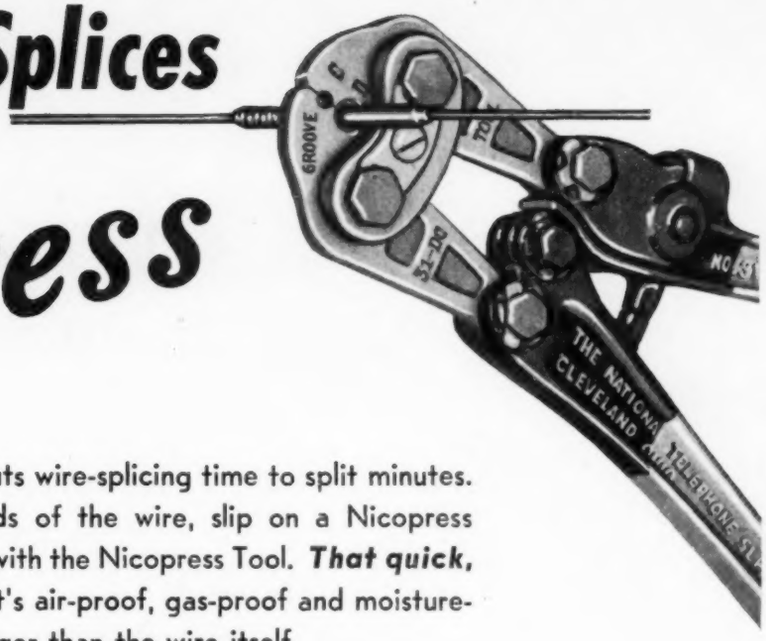
With the lift, company employees removed 370 25-ft. poles in 5½ days, and

(Please turn to page 84)

Split-Minute Splices

with

Nicopress



The Nicopress way cuts wire-splicing time to split minutes. Simply clean the ends of the wire, slip on a Nicopress sleeve and compress with the Nicopress Tool. ***That quick,*** you have a splice that's air-proof, gas-proof and moisture-proof—actually stronger than the wire itself.

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PRESSURE TREATMENTS of Southern Pine Poles, Crossarms, Conduit, Cover Plank, Ground Wire Moulding with No. 1 Creosote Oil or Pentachlorphenol are carried in stock permitting prompt shipments of carload and less than carload orders. Mailing address: P. O. Station "A", Atlanta, Ga.

WILLIAM C. MEREDITH COMPANY, Inc.

Treating Plant: East Point, Ga. — Mailing Address: P. O. Station "A", Atlanta, Ga.

Crystal gazing pays off

Looking ahead to a shortage of quartz and developing a satisfactory man-made substitute has stepped up the Bell System's coaxial cable construction program.

The advertisement on the opposite page tells the public about this bit of foresight—and the valuable results it is producing. Appearing in national magazines during October, it is another indication of how the telephone industry plans ahead for better and better service.

AN ADVERTISEMENT OF THE BELL TELEPHONE SYSTEM

CRYSTALS THAT GROW FROM A SEED . . . The large crystal is an EDT *(Ethylene Diamine Tartrate)* Crystal. It is started from seed (a piece of the mother crystal) and revolved continuously in a solution. In three months it grows to the size shown. Thousands of small plates, cut from the large crystals, are used in filters in Long Distance circuits. By sorting out each telephone conversation, they enable 480 conversations to go over one coaxial circuit at one time.

Crystals for Conversations

Many more Long Distance telephone coaxial circuits, in urgent demand, can be built next year because of Bell Laboratories research and development on synthetic crystals.

Plates of quartz are ordinarily used in the electric wave filters of these circuits.

A long time ago, Bell Telephone Laboratories foresaw a shortage in natural quartz. They devoted years of study to the physics and chemistry of synthetic crystals. They now have one that can replace quartz in telephone filters. Western Electric is now growing these crystals in the factory.

Here again Bell Telephone Laboratories' idea of making things better at lower cost helps to give you the best and most economical telephone service in the world.

BELL TELEPHONE SYSTEM

Sure as

2+2 = 4

Yes, the chemical formula for pentachlorphenol, active ingredient of Chapman "Penta" Preservative*, is fixed and unvarying. That means you get exactly the same thorough, long-lasting protection against termites and decay from every standard treatment of "Penta" Preservative—no matter when or where you buy it. There's no slightest chance of chemical variation, as there may be in the make-up of old-fashioned wood preservatives.

No other commercially acceptable material can give your poles and cross-arms better protection against all wood enemies than Chapman "Penta" Preservative. Ten-year tests on 21 commonly used preservatives have proved that. Your linemen will tell you they prefer poles treated with "Penta" Preservative, since the treated poles are clean, not sticky.

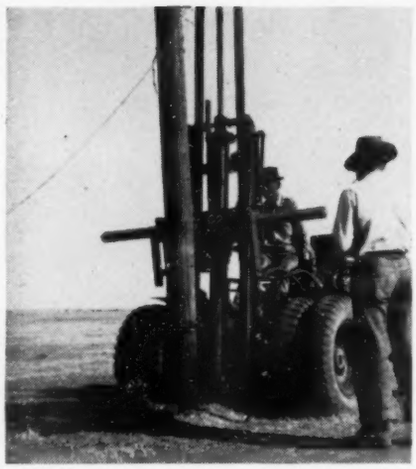
"Penta" Preservative treatment costs no more than other outdated methods, and is applied with the same equipment. You can obtain Chapman "Penta" Preservative in all parts of the United States. Write us for details.

*Trademark

CHAPMAN

CHAPMAN CHEMICAL COMPANY
Suite 540
333 North Michigan Avenue, Chicago 1, Illinois

Chapman "Penta" Preservative contains *Pentachlorphenol*
a product of
The Dow Chemical Company



With the hydraulic lift four employees pulled 105 poles in 4½ hours.

on the last half day with four men, 105 poles were pulled in (4½ hrs.).

Mr. Crowe states the machine will travel about 12 mph along the road; will lift at least 3,000 pounds; uses a chain around the pole and connected to the bar where the fork lift is located (removed for this pole pulling job). The unit required two chain adjustments for each pole: The rope around the pole is to pull the pole in the desired direction when the chain is released after pole has been raised far enough to fall over; it is held from slipping back into the hole by a bar pointed on one end and stuck into the pole at the ground line when the butt end is near the surface (top) of ground: By standing on the bar one man can easily unhook the chain which will allow it to be pulled to the ground. After a little practise this procedure combined with filling the holes and moving to the next pole can be carried out with rapidity.

◆

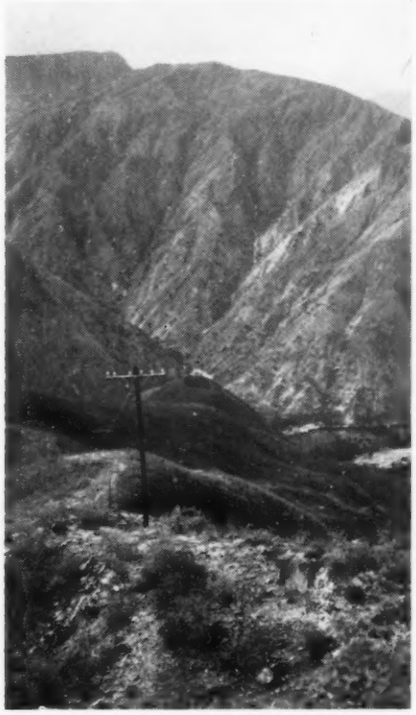
Flying Foreman Aids Independence (Wis.) Company

Monty Fobes, Tomah, Wisc., who travels in his small plane as many people travel by automobile, is the foreman of a new installation project recently started by the Independent Telephone Company.

American Engineer Inspects Colombia Communications

The Communication systems of the Republic of Colombia were recently inspected by a commission from the United States, consisting of H. H. Wheeler and W. C. Markley of the Western Union Telegraph Co., F. H. Menagh of the Erie Railroad, J. W. Cook of the Santa Fe Railway Co., and Rogers Case, head of the Transandean Associates, Inc.

From the historical city of Cartagena, the five engineers inspected telephone and telegraph facilities, radio stations and pole lines as they traveled



All new Colombia communication lines are built of creosoted yellow pine poles.

from one Colombian city to another by car, train and plane. These cities included Barranquilla, Bogota, Bucaramanga and Cucuta.

Colombia is a very mountainous country. There are three high ranges of the Andes mountains extending from the north to the south. These ranges divide the country into mountains and valleys, so that much of the farming is done on the sides of the mountains.

Colombia is a very difficult country in which to construct roads, railroads and communication lines. The construction is expensive; material is hard to get and difficult to transport to the construction sites.

Due to these difficulties, they have separate un-connected narrow guage railways and no through high-ways to the North coast. Their telephone and telegraph circuits are efficiently operated.

(*Please turn to page* 88)

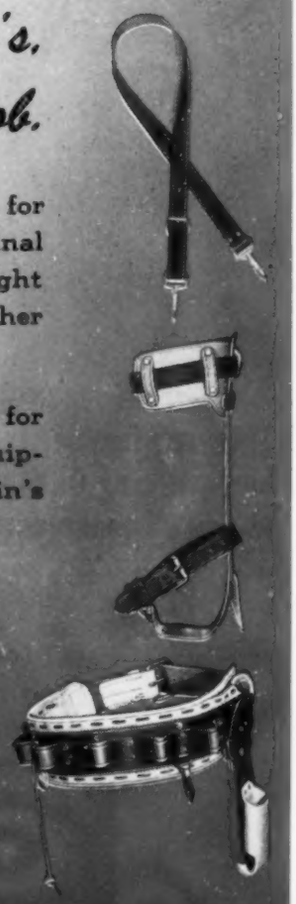
And With Bashlin's, Men Think of the Job.

EQUIPMENT Safety is taken for granted with Bashlin's Original Rolled Edge Belts, Bantam Weight Climbers, Safety Straps, and other linemen's equipment. Why?

Experienced linemen know that for dependable service and safety equipment of the highest quality, Bashlin's is unequalled.

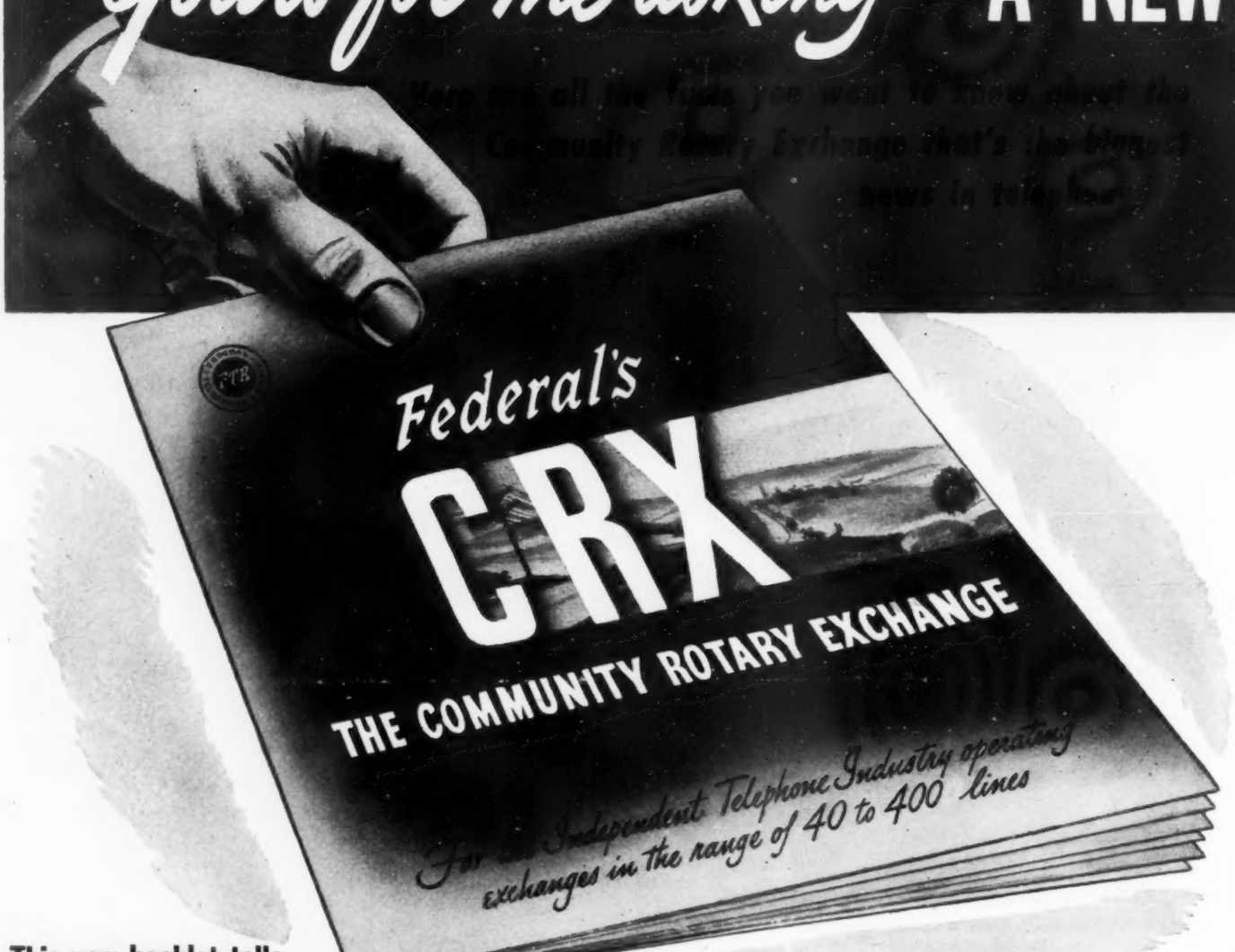
Write for

NEW 3 COLOR CATALOG ILLUSTRATING COMLETE LINE OF BASHLIN SAFETY EQUIPMENT



W. M. Bashlin Co.,
GROVE CITY 1, PA.

Yours for the asking—A NEW C


Federal's
CRX
THE COMMUNITY ROTARY EXCHANGE
For the Independent Telephone Industry operating exchanges in the range of 40 to 400 lines

This new booklet tells how and why CRX offers all these advantages:

- **NEW SIMPLIFIED CONSTRUCTION**
- **NEW LOW-COST INSTALLATION**
- **NEW FLEXIBILITY OF OPERATION**
- **NEW SIMPLICITY OF EXTENSION**
- **NEW EASE OF MAINTENANCE**
- **NEW DEPENDABILITY AND PERFORMANCE**

KEEPING FEDERAL YEARS AHEAD... is IT&T's world-wide research and engineering organization, of which the Federal Telecommunication Laboratories, Nutley, N. J., is a unit.

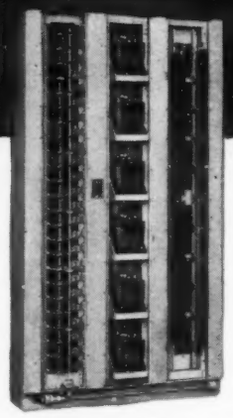
Federal Telephone and Ra

CHAPTER IN TELEPHONE HISTORY

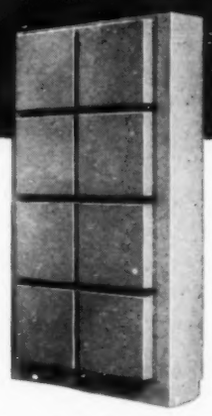
...THE COMPLETE STORY OF FEDERAL'S

CRX

The simplified Rotary equipment that makes unattended dial service profitable for the small community



Switch side of 100-line CRX



Relay-gate side of 100-line CRX

IF YOU ARE now operating a small manual telephone exchange, the story of CRX is "essential reading". For, with Federal's new Community Rotary Exchange, automatic dial service for the small rural and suburban community is now a practical and profitable reality!

Practical because CRX represents a radical departure from the electrical and mechanical complexity of previously available systems and equipment. Simple *rotary* switching, self-contained batteries and power supply, and interchangeable, factory-wired relay plates contribute to long trouble-free operation and ease of installation, maintenance and extension. Standard equipments are available for handling from 40 to 400 lines.

Profitable because CRX can be built by mass-production methods at minimum cost. You save on the initial installation because CRX can be designed for your immediate needs, without extra investment in wiring and cable forms to provide for future extension. Line and link facilities can be added as the system expands. CRX means more toll revenue for you, and better toll service to your subscribers. A new circuit arrangement provides for segregation of toll and local traffic, each having its own completely independent link facilities.

But this is only *part* of the story—obviously it can't all be told here. For the complete facts on CRX, get your copy of this new bulletin by sending in the coupon below.

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Radio Corporation

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Export Distributors:—International Standard Electric Corp. 67 Broad St., N. Y.

FEDERAL TELEPHONE AND RADIO CORPORATION
100 Kingsland Road Clifton, New Jersey Dept. G449

Please send me a copy of the new bulletin on Federal's Community Rotary Exchange

NAME .....

POSITION .....

COMPANY .....

ADDRESS .....

CITY .....

STATE .....

NO WIRE CUTTING

WITH THE NEW **Hemingray**

TRANSPOSITION INSULATOR

These new Hemingray No. 56 Insulators were designed especially for "point-type" transpositions on standard tandem and four-pin brackets. Retranspositions are made without cutting wires by simply "rolling in" the old lines. Extra-deep grooves eliminate need for tie wires.

Recommended and Distributed by

AUTOMATIC ELECTRIC SALES CORPORATION

1033 W. Van Buren St. Chicago 7, Ill.

ACORN Insulated Wires

★

Featuring Long-Life Insulation Individual Packaging

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17 Bronze Weatherproof
17 Bronze Neoprene
Twisted and Parallel

No. 20 Bridle

No. 22 Oak-O-Fone Plastic

No. 22 Rubber Insulated Braided Interior

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SUTTLE EQUIPMENT CO.
LAWRENCEVILLE, ILLINOIS

DEPEND ON
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SINCE 1889
NATCO
CLAY CONDUIT

The proved and standard Protection for Underground Telephone Cables.

Cheapest in the long run. Highest quality and a full line of shapes.

National Fireproofing Corp.
202 E. Ohio Street, N. S.
PITTSBURGH, PA.

Pole lines in Colombia are constructed near existing highways and railroads.

but are not adequate to carry the load. This has resulted in the use of airplanes for transportation and radios for communication, however these facilities are good only between the larger cities and do not serve the intermediate points.

Most of the cities are served by automatic telephone plants and all new installations are of that type.

All of the new communication lines are built of creosoted yellow pine poles and telephone circuits are being transposed for carrier operation. Colombia does not grow timber suitable for poles, but does grow suitable timber for use as crossarms.

The pole lines are constructed near existing highways and railroads or near highways or railroads under construction, of which there are a great number.

Roads are constructed by cutting shelves in the mountainsides and due to the curvature of the mountain ranges, they wind back and forth around the mountainside. At one location where the road followed the curvature of the mountain for 1½ miles; the pole line was about 1,000 feet in length. On account of the terrain, the construction engineer is faced with the problem of staying as close to the road as possible, and of course, building the line the shortest distance. In order to do this, the line is layed out as straight as possible up the pass in the mountains so that it will be near the road at as many points as possible and also reach any towns or cities along the way.

The poles used in the body of the line are 25 ft. Class 7 CYP and the crossarms are of native wood. In this kind of construction, there are problems of guying, grading, clearing of the right-of-way, spanning canyons and rivers, and transposing. The long span is necessary in order to reach across rivers and canyons and frequently at long span crossings sharp corners are necessary

(*Please turn to page* 90)

Plastic-insulated wire leaving the extruding machine.

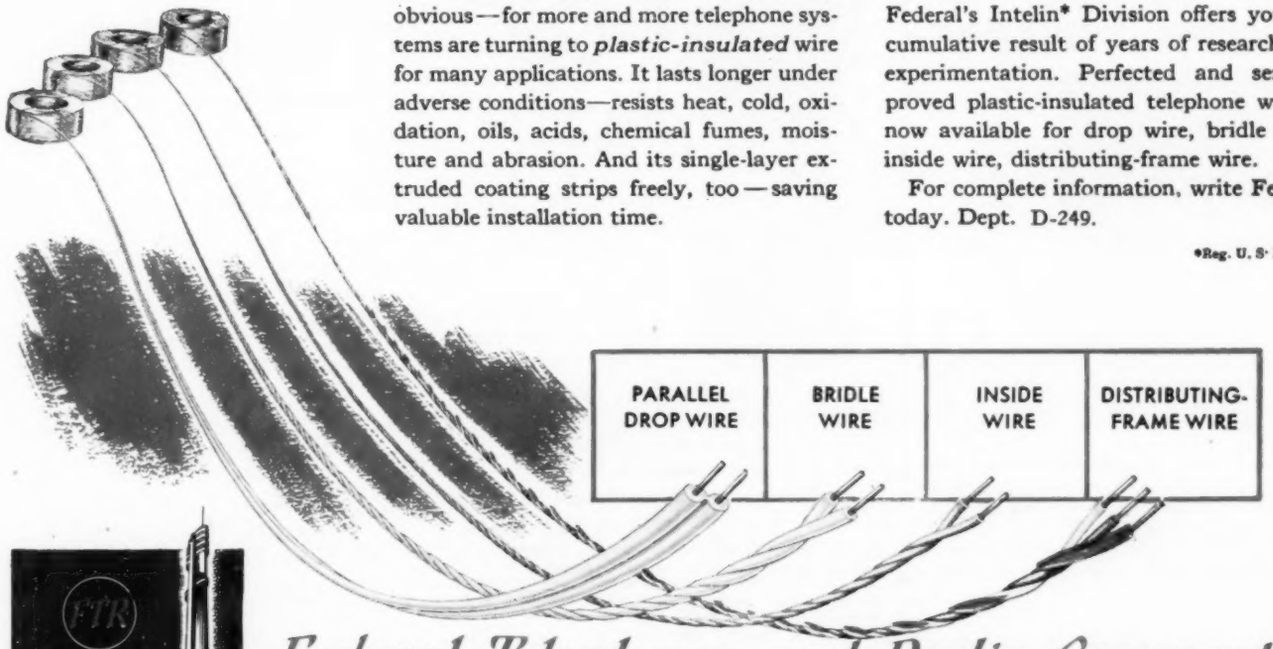
. . . for LONGER LIFE and EASIER STRIPPING

WHAT WILL the well-wired telephone system "wear" in 1948? The trend is already obvious—for more and more telephone systems are turning to *plastic-insulated* wire for many applications. It lasts longer under adverse conditions—resists heat, cold, oxidation, oils, acids, chemical fumes, moisture and abrasion. And its single-layer extruded coating strips freely, too—saving valuable installation time.

The application of plastics to wire insulation was pioneered by IT&T—and today Federal's Intelin* Division offers you the cumulative result of years of research and experimentation. Perfected and service-proved plastic-insulated telephone wire—now available for drop wire, bridle wire, inside wire, distributing-frame wire.

For complete information, write Federal today. Dept. D-249.

*Reg. U. S. Pat. Off.



FTR
An IT&T Associate

KEEPING FEDERAL YEARS AHEAD... is IT&T's world-wide research and engineering organization, of which the Federal Telecommunication Laboratories, Nutley, N. J., is a unit.

Federal Telephone and Radio Corporation

SELENIUM and INTELIN DIVISION, 1000 Passaic Ave., East Newark, New Jersey

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ESTWING TOOLS

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CUSHIONED for COMFORT

The sole-leather laminated construction of Estwing Tool handles, with I-beam core, cushions the hand against shock, provides extra resilience for the perfectly balanced, finely tempered heads. Handles never break—heads cannot fly off! For hammers, axes and hatchets, specify Estwing.

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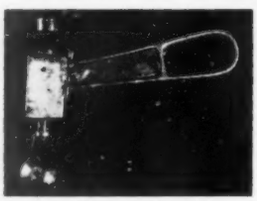
The Magic Cable Stripper



SAFE
Convenient
Light Weight
Sturdy

STRIPS CABLE
Plastic Covered
Rubber Covered
Lead Covered
Armored Covered, etc.

This tool will safely, surely and easily strip cables with outside diameters up to 1 5/16 inches. The body of the "MAGIC CABLE STRIPPER" is of cast aluminum with all operating mechanism of tempered steel. The replaceable blade is of tempered steel with an adjustable screw at bottom of blade holder to adjust length of BLADE CUTTING EDGE. The shuttle is equipped with adjusting nuts to regulate depth of cut. Cutting mechanism has positive friction brake. The "MAGIC CABLE STRIPPER" comes equipped with extra blade carried in the handle compartment.

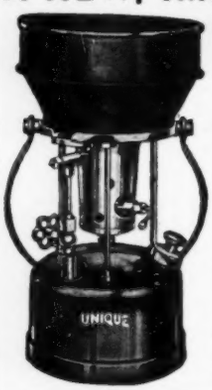
UNCONDITIONALLY GUARANTEED

To order or for further information

WRITE

TACA COMPANY
4307 RAYNOL STREET
LOS ANGELES 32, CALIFORNIA

A NEW, IMPROVED— UNIQUE SPLICERS FURNACE



Melts 50 Lbs of Solder in 10 Minutes

Basically the same fine furnace used by larger Utilities for 20 years - Now with

- **FINE FLAME CONTROL**—keeps solder at "just the right temperature."
- **"QUICK CHANGE" GENERATOR**—removed and replaced in 60 seconds.
- **WIND-PROOF** — housing shields generator — No extra shield is needed.

Additional Features: Long-life figure "8" generator—with orifice scraper. Rugged semi steel top plate. Powerful pump. 18 gauge welded steel tank with bottom shock ring Size 8" x 13". Weight—15 lbs. Popular size for 6", 7", and 8" pots.

No. 55-I—KEROSENE No. 53-I—GASOLINE

If clear white gasoline is hard to get, order the Kerosene Furnace. You'll like it.

We Invite An Approval Test

UNIQUE MANUFACTURING CO., INC
221 W. Walton St., Chicago 10, Ill.

Inspection of Columbia Communications

(Concluded from page 88)

on account of winding roads and steep cliffs and finally placing of transposition brackets in long spans.

The wires used were No. 8 AWG, either copper-weld or copper-bronze. The guying was done with 6,000 pound strand.

Between several of the cities where a phantom group was in service, a new type phantom was developed to replace the phantom on the vertical bracket.

In a type 4, the two pins in the center of the group on the arm were installed to carry one pair of the phantom group; the other pair being placed on two drop brackets under the arm.

In a type 1, two of the Case magnesium brackets with spool type insulators were installed, one on the top of the arm and one on the bottom of the arm. This was possible, because with this type bracket the glass can be reversed to proper position when bracket is reversed.

In a type 2, where the left hand pair transposes, a point bracket can be installed on the top of the arm and the right hand pair transposed on two drop brackets placed under the arm.

In a type 3, where the right hand pair transposes, two pins are installed in the center of the group above the arm to carry the left hand pair of the group, the right hand pair of the group is attached to a point bracket bolted under the arm.

This type phantom bracket has numerous advantages over the vertical bracket, some of which are set out below:

(a) It is of stronger construction and holds wires more firmly.
(b) It will prevent loss of all wires in the group when top wires break and will prevent a lot of wire crosses.
(c) It does away with right and left hand twist of wires.
(d) It transposes side circuits of the phantom on pole points.
(e) It prevents reboring of crossarms.
(f) It allows throwing the transposition of the phantom first right and then left, thereby avoiding spiraling of the pairs about each other.

When these lines are completed they will constitute a very substantial connecting link in the Colombian communication system, connecting almost all of the important cities in the north Atlantic area of the country by carrier telephone and printing telegraph circuits.

Every day
in
Every way
it's
getting
harder
to have
things
done!

Why not take
the burden
of getting
things done
off *your*
shoulders?

GUSTAV HIRSCH ORGANIZATION Inc.

310 WEST BROAD ST.
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(Internationally known)

SERVING YOU THROUGH SCIENCE

U.S. WIRES

FOR ALL TELEPHONE NEEDS

- DROP WIRES
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GraybaR
TELEPHONE SUPPLIES
BULLETIN

POLES AND CROSSARMS

You're sure of early delivery if you order poles and crossarms from Graybar Electric Company.

We supply full-length, pressure-treated poles and Douglas fir crossarms. The high, rigid standards these materials have to meet are your assurance of outstanding strength, endurance, and uniformity — adding up to *long service.*

...AND POLE-LINE SUPPLIES

Insulators, wire, strand, hardware, and tools — all made by leading manufacturers — are distributed by Graybar, the single, convenient source of *everything* for pole-line construction and maintenance. Your local Graybar Representative is anxious to show how our service can simplify your pole-line work. Why not call him today? *Graybar Electric Company. Executive offices: Graybar Building, New York 17, N. Y.* 47106

EVERYTHING IN TELEPHONE SUPPLIES via GraybaR

IN OVER 90 PRINCIPAL CITIES

SPECIALIZED HELP — YOURS FOR THE ASKING!

At each of our 18 key houses, there are Graybar Specialists in communication, inside electrical construction, outside construction, lighting, power apparatus, and other electrical lines. These men have intensive experience in their respective fields and are competent to assist you on technical problems. The services of both your local Graybar Representative and near-by Graybar Specialists are always available to you.

"Pow'r Pull" Proves In On Construction Jobs

Almost every man in the construction or maintenance departments of utility companies has a constant need for a light-weight puller, wire stretcher or hoist. Most tools of this sort available today are either too heavy and bulky or are more expensive than their needs justify.

The Maasdam POW'R PULL, now in production and ready for delivery,

Maasdam POW'R PULL is fast and dependable for many every day jobs.

eliminates these objections and can be used in places where bulky chain hoists costing much more and operating vertically only are impractical.

POW'R PULL is fast and dependable for many every day jobs . . . stretching wire, lashing poles to truck or trailer, loading or unloading heavy crates, cable reels, stretching fence wire, etc.

POW'R PULL's 14 to 1 power ratio provides up to 80% more pull per pound with 1500 pound capacity guaranteed. Tested to full 50% overload.

Made of high tensile alloys it weighs but 6 pounds. POW'R PULL is conveniently carried fastened to an ordinary tool belt and is easily operated by one man.

Maasdam POW'R PULL retails at $14.75 FOB Chicago, and is distributed exclusively by Telephone Repair & Supply Company, Chicago 26, Illinois.

New JOIC Drill Performs Many Jobs

A new tool, especially useful to telephone engineers, repairmen and installers, is the JOIC all-angle drill. The manufacturer states the JOIC drill can drill around corners, in tight joints, at odd angles, drill a series of holes at exactly the same height. It is claimed to be the only hand drill with swivel chuck and swivel handle, thus offering every feature of standard ¼" hand drills plus unusual adaptability.

JOIC's swivel chuck locks in seven different positions. At the same time the handle will adjust anywhere on a 180 degree arc by loosening the thumb screw. Flat side of drill holds bit paralled to any surface to provide complete self-alignment. All adjustments are fool-proof and can be made instantly.

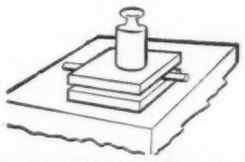
All metal, JOIC is rust proof and

Tests show it...Field performance proves it

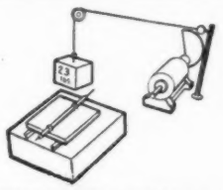
Drop wire lasts longer when protected with a jacket of

DU PONT NEOPRENE

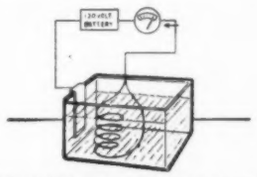
These tests show serviceability of telephone drop wire



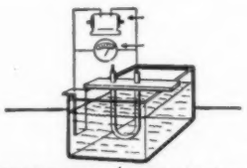
COMPRESSION TEST—Shows pressure necessary to cause failure, measures crush-resistance.



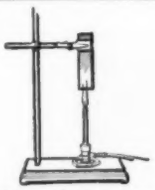
POUNDING TEST—25 blows per minute, 6½-inch drop, test ruggedness of material.



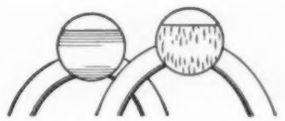
INSULATION TEST—120-volt battery and galvanometer measure leakage.



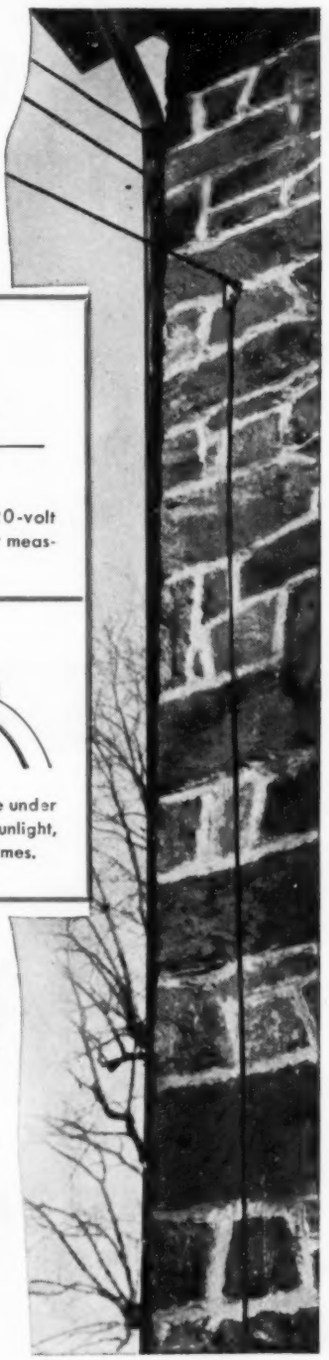
BREAKDOWN TEST—High-voltage generator and voltmeter check maximum voltage limit.



FLAME TEST—Underwriters' test shows the resistance to flame propagation.



WEATHER TEST—Exposure under strain reveals effect of sunlight, heat, cold and chemical fumes.



MANUFACTURERS of telephone drop wire didn't just happen to use Du Pont neoprene as jacket material. They ran many tests . . . convinced themselves that no other material satisfied *all* their needs so well as neoprene. And actual field installations are constant proof that they were right.

Throughout the year, neoprene protects the drop wire against damage from rain, snow, sunlight and heat. It resists abrasion, flame, and chemical fumes. So when you select drop wire—or any type of wire and cable—make sure it is jacketed with Du Pont neoprene. It's your assurance of longer service, better performance, and low maintenance costs.

• • •

For the latest information on neoprene, read **The Neoprene Notebook.** *It's full of interesting stories about neoprene's many uses in industry. Write for your free subscription today. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Division M-10, Wilmington 98, Delaware.*

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NEOPRENE

The rubber made by Du Pont

HERE'S WHY NEOPRENE DOES SO MANY JOBS SO WELL!

- ★ High tensile strength, resilience, low permanent distortion.
- ★ Tough and durable, resists abrasion and cutting.
- ★ Superior resistance to sunlight, aging, ozone, and heat.
- ★ Resistance to deterioration by oils, solvents, chemicals, acids.
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- ★ Special compositions are flame-retarding, static-conducting, flexible at low temperatures.

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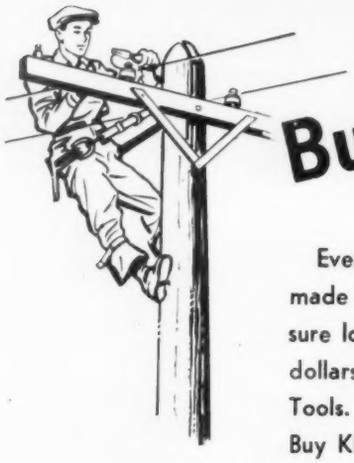

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Every item in the "Klein Line" is made from top-quality material to insure long, hard service. That's why your dollars go farther when you buy Klein Tools. Take a tip from men who know. Buy Klein.

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- Climbers and Belts
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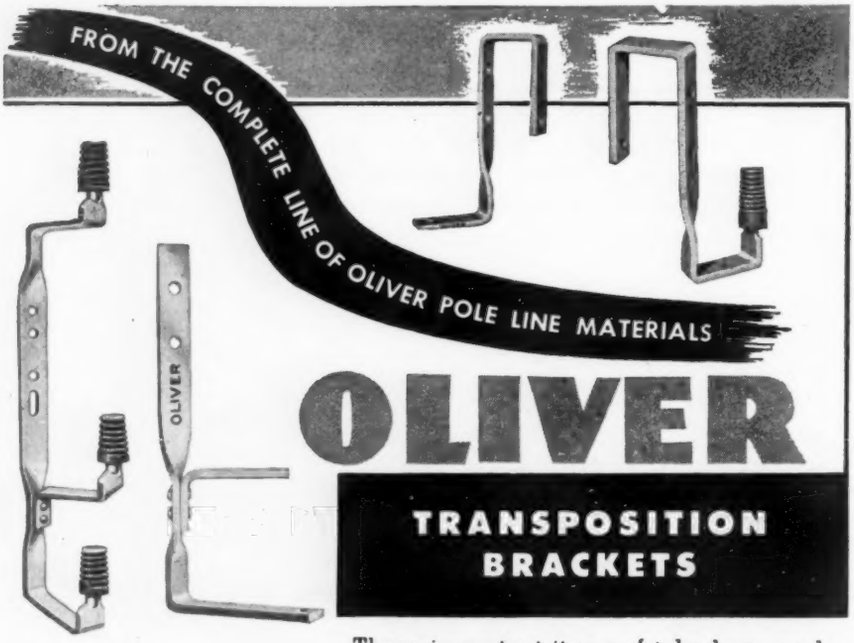
FROM THE COMPLETE LINE OF OLIVER POLE LINE MATERIALS



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TRANSPOSITION BRACKETS

These important items of telephone and telegraph line hardware are representative designs, based upon practical experience extending over many years. Complete sizes and details of these and other designs are given in Oliver Catalog 43.

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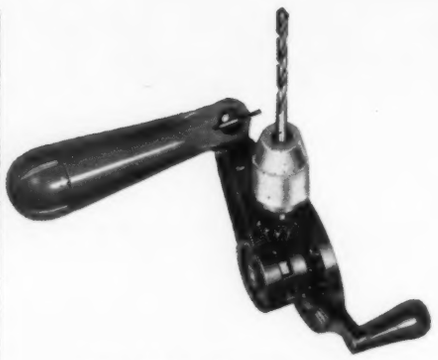

New JOIC all-angle Drill.

enameled. End cap of handle has storage space for spare drills. Length: 10". Weight: 22 oz. For complete information write New Products' Editor, Telephone Engineer Publications.

◆

Onan & Sons Issue Electric Plant Catalog

A new 16 page catalog covering their complete line of Electric Plants is offered by D. W. Onan and Sons Inc. Attractively presented in three colors, this 8½ by 11 in. catalog, fully illustrated, gives helpful information and assistance in plant selection to potential users of electric generating plants.

The catalog describes electric plant sizes ranging from 350 to 35,000 Watts A. C. in all standard voltages, frequencies and phases. If Direct Current of the "direct service" type is required, selection ranges in 115-volt models run from 600 to 10,000 Watts and in 230-volt models from 3,500 to 10,000 Watts. Battery Charging plants are also described: 6, 12, 24, 32, and 115 volts in sizes from 500 to 6,000 Watts. Accessories for easier handling and better installation are described.

Copies may be obtained by writing New Products' Editor, Telephone Engineer Publications.

◆

Biddle Offers New Testing Booklet

James G. Biddle Co., 1316 Arch Street, Philadelphia 7, has just published a new manual containing up-to-date information on insulation resistance testing and how to use the various types of their "Megger" Insulation Testers. It treats with considerable care the testing of various types of electrical equipment, including preparation of apparatus for test and safety precautions.

Much new and valuable information is included on test leads, effect of ca-

(*Please turn to page* 96)

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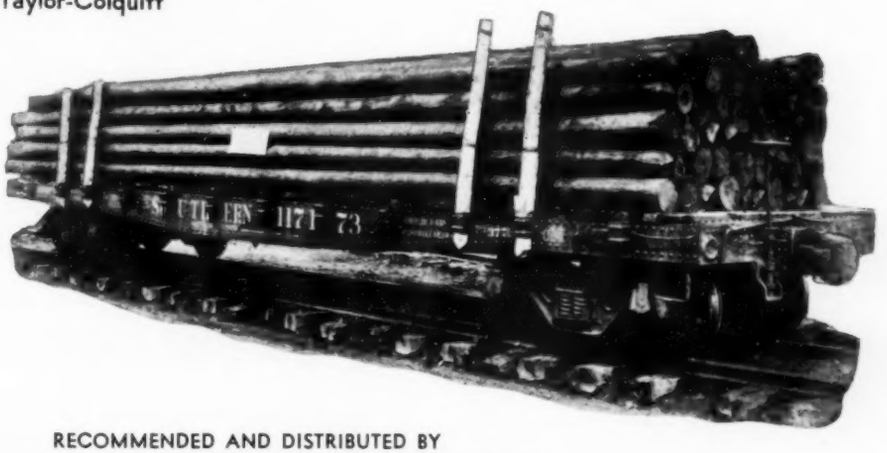
TAYLOR-COLQUITT

Vapor-Dried Poles

• Telephone plant men enthusiastically endorsed the new Taylor-Colquitt "Vapor-Drying" process demonstrated at the U.S.I.T.A. convention. Today hundreds of these new vapor-dried Taylor-Colquitt poles are on their way to pole lines all over the country. You need these longer-lasting poles for your own lines. Order them today.



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Galvanized Steel
CABLE LASHING WIRE

Widespread adoption of the "spinning" method of cable suspension has brought increased demands for a superior and consistently dependable lashing wire. . . .

Crapo Galvanized Steel Lashing Wire (.091 inch diameter) has been developed specially to fill these demands. It is manufactured from selected steel, is carefully processed and is given a heavy zinc coating for longer life. The finished wire conforms, in every respect, to the exacting specifications of leading telephone engineers—for ductility, tensile strength, torsion and galvanizing.

Crapo Galvanized Steel Lashing Wire is put up in neat, compact, thread-lay coils for ease in handling. For use in modern cable-spinning machines. Packed in cartons containing 6 coils, each coil containing approximately 325 feet of wire.

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"STAINLESS STEEL"

Crapo Cable Lashing Wire also can be supplied in "Stainless Steel" (.065 and .045 inch diameter). Complete details will be forwarded upon request.

Contact your jobber of *Crapo* Galvanized Telephone Wire and Strand or write direct for further information!

INDIANA STEEL & WIRE COMPANY · MUNCIE, INDIANA

pacitance, operating time, surface leakage, and use of the Guard terminal.

Separate sections are devoted to testing wet apparatus and drying out moisture, temperature and humidity, and methods of interpreting insulation resistance tests. The principle of operation and voltage characteristics of the "Megger" instrument are explained; and the book concludes with a section on the use of the "Bridge-Meg" Insulation and Resistance Tester with full data on Wheatstone Bridge measurements and locating faults. An index is included for ready reference.

This manual, 21J-42, is offered free of charge, to those having reason to be interested.

◆

Stanley Tools Release "Expert Soldering" Bulletin

The Stanley Tool Co. has recently released a folder on "Expert Soldering."

This folder gives a great deal of information about correct soldering practice, selection of proper flux, hints on the right procedure for care of the soldering iron, etc. It also lists and illustrates the various soldering irons in the Stanley line, which are designed for production soldering.

Also described in the folder are Stanley armor clad tips. Copies of the folder may be obtained direct from New Products' Editor, Telephone Engineer Publication.

◆

Chas. E. Adams Joins T. J. Cope, Inc.

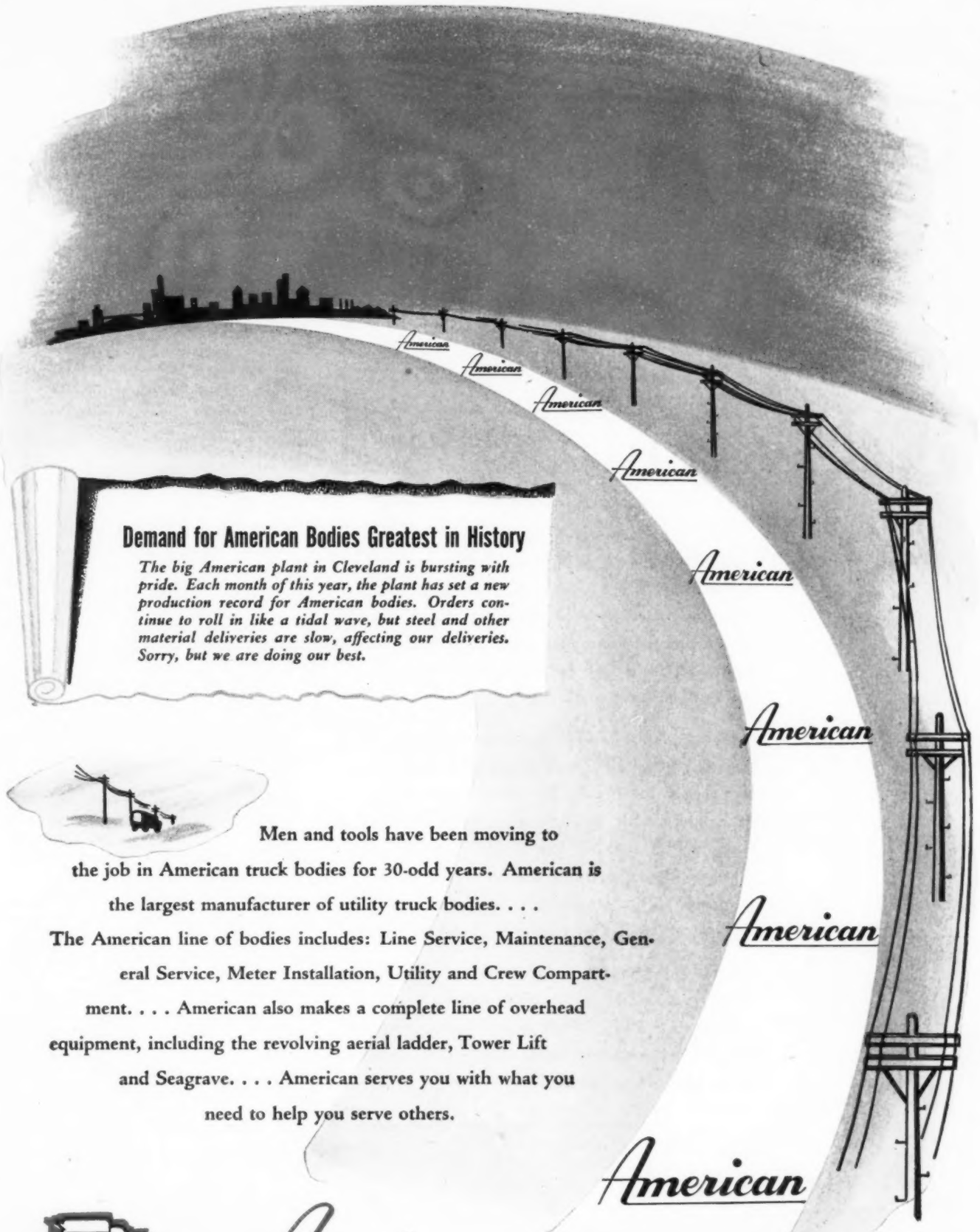
T. J. Cope, Inc., of Philadelphia, Pa., manufacturers of cable installation equipment, have announced the appointment of Charles E. Adams as their agent covering the Western Pennsylvania and West Virginia territories. Mr. Adams, well known for the past 16 years as sales engineer for Hubbard Company, will handle the complete Cope line with his offices at 208 Kirby Bldg., Pittsburgh, Pa.

◆

Valuable Booklet Released By Electric Products Co.

The Electric Products Company, 1725 Clarkstone Road, Cleveland 2, Ohio, has just released a new bulletin describing E. P. Diverter-Pole Motor-Generators for the floating charge of telephone batteries and also for all exchange direct-current requirements.

This attractive, helpful publication will be of value to every telephone company. Copies may be obtained by requesting Bulletin 209.



Demand for American Bodies Greatest in History

The big American plant in Cleveland is bursting with pride. Each month of this year, the plant has set a new production record for American bodies. Orders continue to roll in like a tidal wave, but steel and other material deliveries are slow, affecting our deliveries. Sorry, but we are doing our best.

Men and tools have been moving to the job in American truck bodies for 30-odd years. American is the largest manufacturer of utility truck bodies. . . . The American line of bodies includes: Line Service, Maintenance, General Service, Meter Installation, Utility and Crew Compartment. . . . American also makes a complete line of overhead equipment, including the revolving aerial ladder, Tower Lift and Seagrave. . . . American serves you with what you need to help you serve others.

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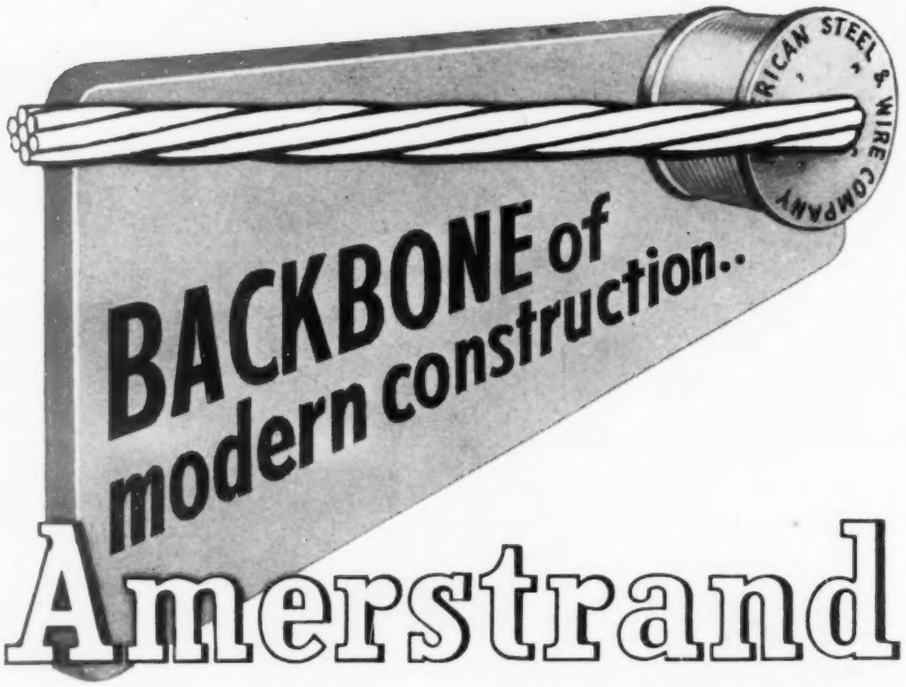

All through your outside plant, guys and messengers have a big job to do. Through rain and wind, sleet and snow, their strands must carry your cables and keep your poles erect. From the central office to the most distant pole, they form the backbone of your plant.

No wonder telephone men everywhere choose Amerstrand for their messengers and guys. It's formulated specifically for these services, and its production is carefully supervised at every stage. That gives it the tensile strength and the superior corrosion resistance that is needed for telephone construction, to make the installation of messengers and guys a "one-time" job.

And Amerstrand is made in different weights and strengths, so you can order just the one you need for each job. That means better control of job costs—no hit-or-miss ordering of strand that's too light or too heavy.

Order Amerstrand for the finest of modern construction.

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Rural Telephone Service Agreements

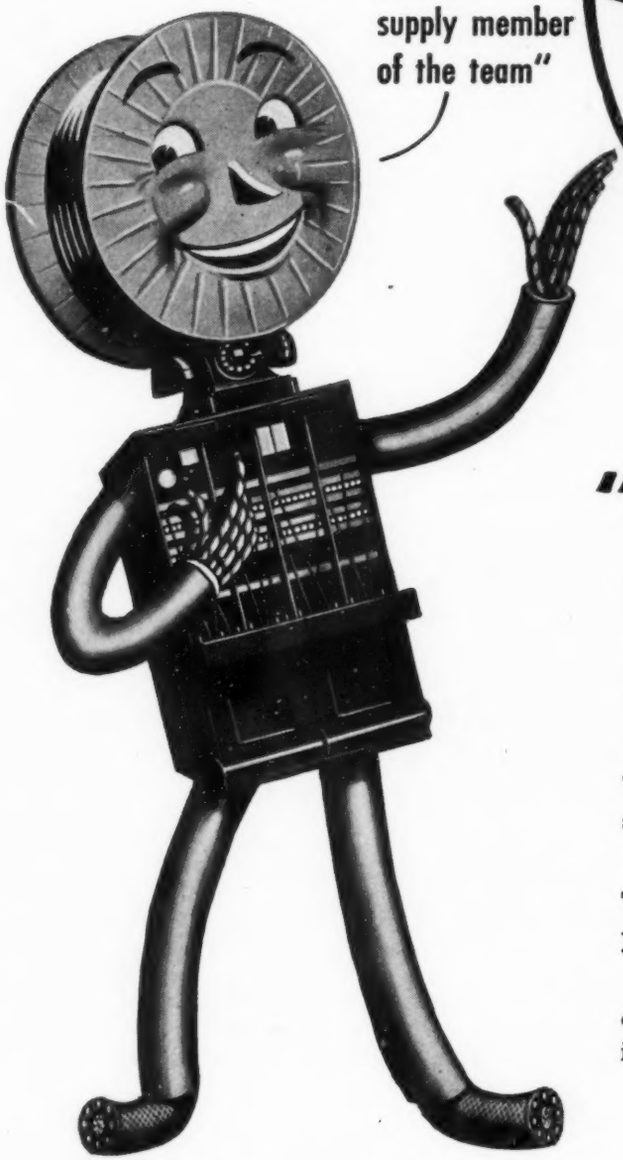
The Bell System and the Rural Electrification Administration have developed two model agreements expected to have a far reaching effect in promoting the further extension of telephone service in rural areas. These agreements suggest the general form and substance of contracts which may be executed between Bell telephone companies and REA cooperatives, covering (1) the furnishing of telephone service by "carrier" methods over the cooperatives' power distribution wires, and (2) joint use of pole lines of the telephone companies and the cooperatives so that both electric and telephone wires may be carried on the same poles in many rural areas.

The way is now open, according to the A T & T, for widespread use of these two recently developed methods of bringing telephone service to more farm homes. Discussions between the Bell System and the private power companies, looking toward similar agreements, are now under way, and the United States Independent Telephone Association has indicated that telephone companies which are not a part of the Bell System are giving active consideration to contracts of similar type.

Power-line carrier telephony, developed by the Laboratories, makes it possible to transmit telephone conversations over rural electric distribution wires, and in numerous instances may prove to be the most practical and economical method of bringing telephone service to farm homes which are distant from existing telephone pole lines but close to electric power lines.

Under the Bell System-REA suggested agreement covering power-line carrier, contracts between the individual telephone companies and REA cooperatives will provide that the telephone company supply and own all special equipment required to take the telephone currents onto and off the power wires. The telephone company will also maintain some of this equipment, but not that part of it directly associated with the live power wires; the latter part will be maintained by the cooperative at the telephone company's expense.

In the case of "joint-use" contracts which cover the placing of both telephone and power wires on the same poles, either the telephone company or the REA cooperative may be the owner of the poles. Hence the contracts will provide that on lines appropriate for joint use, either party, by paying the rental charges specified, may use the other's poles.



AMERICAN TELEPHONE & TELEGRAPH CO. AND ASSOCIATED COMPANIES

BELL SYSTEM

"I help make your telephone service the world's best"

"Long before most of you were born—back in 1877—I started making telephone equipment for the nation.

"As the manufacturing and supply member of the Bell Telephone team, I've *always* had a lot to do with making your service the world's best—at the lowest possible cost.

"The close teamwork made possible by my being a part of the Bell System was never more important than today—in helping to meet record demands for telephone service.

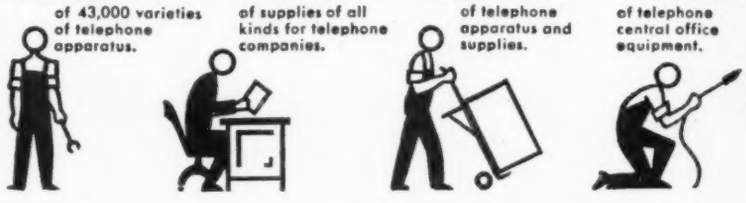
"My name is Western Electric."

MANUFACTURER... of 43,000 varieties of telephone apparatus.

PURCHASER... of supplies of all kinds for telephone companies.

DISTRIBUTOR... of telephone apparatus and supplies.

INSTALLER... of telephone central office equipment.



Western Electric

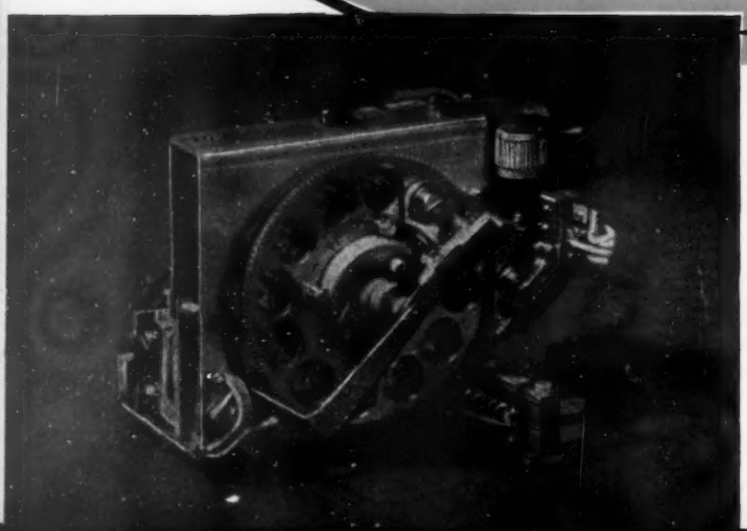
A UNIT OF THE BELL SYSTEM SINCE 1882

LINK THE WORLD'S
in the Centres of Transport—

THE conveyance of materials from one point to another was one of the earliest problems of mankind, hence one of the greatest inventions of all time, that of the wheel. Today the transport of passengers and freight is a major industry. To its administrators, dealing with distances and working constantly against time, the advantages of telephone communication are only too apparent. Where connections must be established over some distance through a series of intervening exchanges, Strowger Automatic Telephone Equipment is available in a particularly appropriate form. The Strowger Impulse Regenerator enables automatic switching to be effected throughout multi-exchange areas for it receives and stores trains of dial-impulses, many of which may be distorted, and then transmits equivalent trains of perfect impulses.

with

STROWGER
TELECOMMUNICATIONS

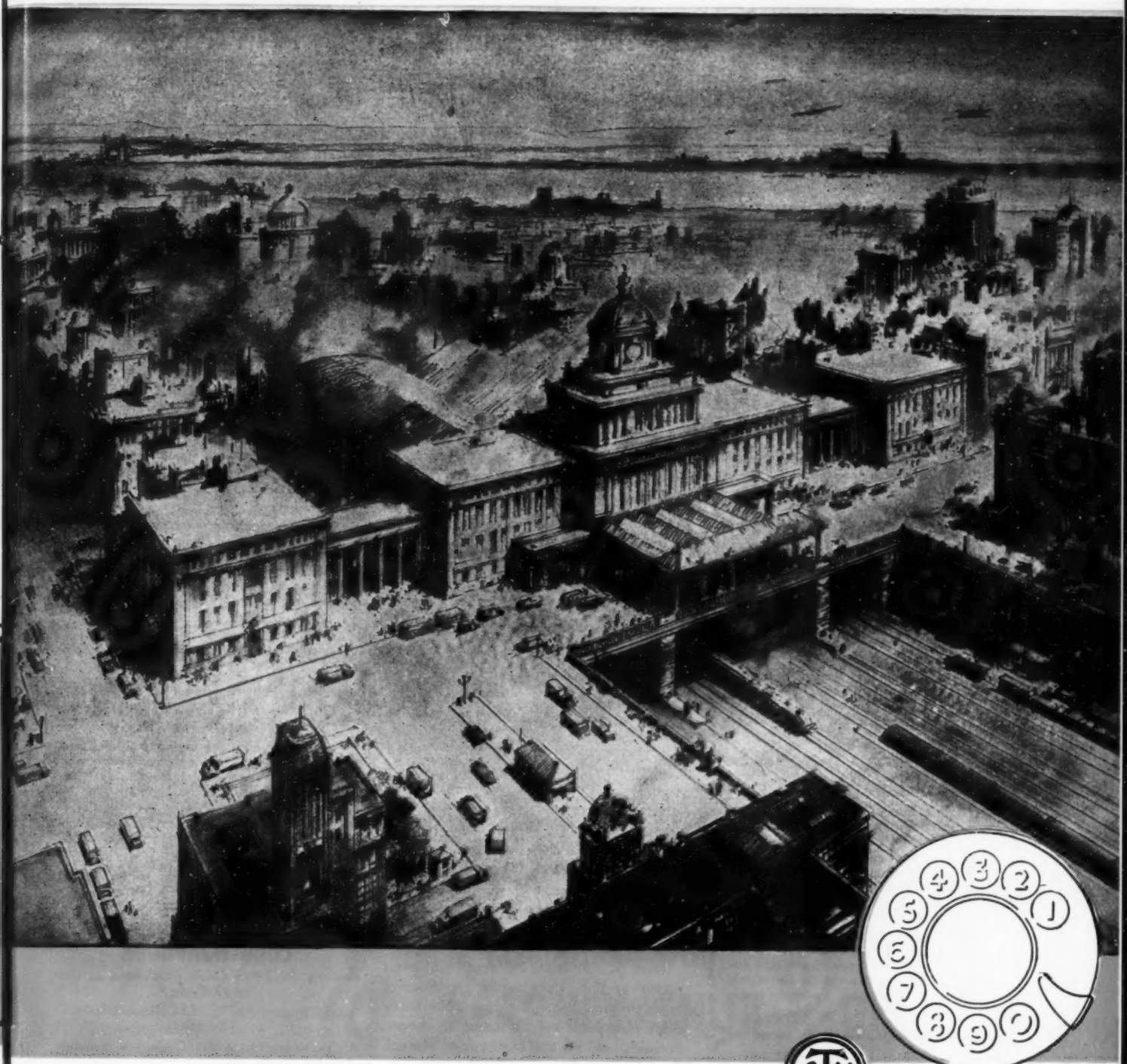


THE IMPULSE

- *has been developed because :—*
  - *(a) the speed of the dial on a subscriber's telephone may vary between 8 and 12 impulses per second and the "break" period may be between 63% and 70% of the impulse.*
  - *(b) the line to line insulation of a subscriber's line may be as low as 50,000 ohms and its loop resistance 750 ohms.*
  - *(c) as many as three repetitions of the impulses may take place in a telephone network.*
  - *(d) in result, the impulses become distorted before operating a selecting mechanism.*

A7083-A2(1)

RESOURCES . . .



REGENERATOR

- *has therefore been designed to receive impulses before they become too distorted and re-transmit them at the correct speed and ratio within narrow limits.*
- *has capacity for storing 40 impulses so that the "input" never overtakes the "output."*
- *has the facility of catering for any number of impulse repetitions, the loop and leak resistances in each stage can be of any value up to 2,000 ohms or as low as 50,000 ohms respectively*
- *has a robust construction and compact dimensions of 4¼"x4"x4" and only occupies the space of six type 3,000 relays.*
- *has ease of adjustment and ease of removal if necessary, for it can be "jacked" in or out.*

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All-Steel Screw Anchors are Double-Welded for GREATER STRENGTH!

For greater strength . . . easier installation . . . and increased holding power . . . the thin, fast-cutting blades on Chance No-Wrench Screw Anchors are separately forged, then *double-welded* to the rod. With the helix correctly and accurately pitched, tapered, and sharpened, these all-steel anchors bite into the ground with a minimum of effort and earth disturbance, and provide maximum strength and holding power. The forged steel Tripleye rod admits a bar for use as a "wrench", and the full-rounded eye gives protection against kinking for one, two, or three guy strands.

WRENCH TYPE SCREW ANCHOR

This all-steel anchor permits use of a smaller anchor rod since installation strain is applied directly to the hub of the anchor instead of the eye of the rod.

CHANCE SWAMP ANCHOR

Of cast, malleable iron, with sharpened cutting edges that bite through roots, this anchor is invaluable for installations in swamps, bogs, marshes or quicksand.

How much will an anchor HOLD?

Chance engineers have developed a new formula for determining the type and kind of anchor to use for every guying condition. Your copy is ready and will be sent upon request.

C4725

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$325,000 Expansion Program For International Falls, Minn.

A $325,000 expansion program, calling for immediate rehabilitation of the International Falls, Minn., exchange and conversion by 1949 to an automatic system, was recently disclosed by Elnathan Gates, vice president and general manager of Minnesota Telephone Company.

Mr. Gates said a new section will be added to the switchboard and necessary equipment installed to make two- and four-party line service available about Nov. 1. This will enlarge the central office to enable offering of service to persons now without telephones.

Outlining long range plans, he said that work of constructing a new dial exchange building will begin early next year. At the same time, the telephone firm will begin installation of a new cable plant, most of it underground.

Minnesota Telephone Company is a Minnesota corporation serving 25 communities in Minnesota. It is owned by National Telephone Company of Chicago whose subsidiary units operate telephone exchanges in Minnesota, North Dakota, Wisconsin, Iowa and Illinois, with some 30,000 subscribers. Operating headquarters for the organization is at Minneapolis.

◆

Commercial Mobile Service Opens In Honolulu

Although mobile telephones are nothing new to the people of Honolulu after a year of successful experimenting, nevertheless they made headlines in the city when the Mayor of Honolulu placed a call to the Governor of the Territory. This call, from one of the 30 mobile units now installed in the city marked the opening of mobile service on a commercial basis by Mutual Telephone Company of Hawaii.

John H. Wilson, 75 year old twice mayor of the "Paradise of the Pacific" made the first call while driving in downtown Honolulu with William C. Avery, president and general manager of Mutual. The call was relayed via the telephone company's main switchboard to the Governor's mansion, where it was received by Governor Ingram H. Stainback. After discussing the clarity with which the call was received by both parties, the Governor humorously told Mayor Wilson that once upon a time he could leave his telephone behind in the office, but with this innovation he could never be left alone.

In a subsequent conversation Mr. Avery called the president of the University of

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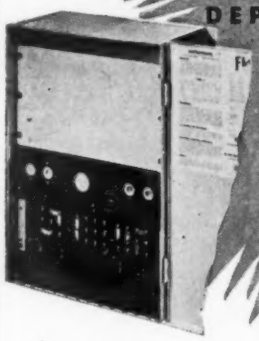

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- Does Everything With 3 Simple Elements and NO MOVING or EXPENDABLE PARTS.
- Maintains Constant Battery Voltage With +/−1% under conditions of varying load and fluctuations in supply voltage.

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LORAIN, OHIO
DESIGNERS AND MANUFACTURERS OF SUB-CYCLE

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. . . in strict accordance with latest National Electrical Code

Here's a complete, new revision of Abbott's useful Handbook, covering all changes, new rules, etc., in the latest National Electrical Code. Gives rules and requirements for all wiring and installation jobs — what they mean — how to apply them. It's a handy reference book for busy, practical men. Also useful to anyone who wishes to make a thorough study of the Code.

Revised Sixth Edition of Abbott's

National Electrical Code Handbook

Covers the 1946 Code (Adopted as the 1947 Code)

633 pages, 5x7½, 421 illustrations, $4.00

All requirements of the Code are included in this Handbook. It contains invaluable data for the electrician, inspector, contractor and engineer, including:

—definitions of all Code terms
—types of wiring approved under given conditions
—general requirements for all wiring systems
—special requirements for outside work, emergency lighting, hazardous locations, high-voltage installation, etc.

Write for your copy of the Handbook today. Address: Telephone Engineer Publishing Corp., 7720 N. Sheridan, Chicago 26, Ill.

Hawaii and stated that "The opening of our new service on the same day as the opening of another year at the University shows that the Telephone Company has the same interest in the progress of commerce as you have in the progress of education."

The Board of City Water Supply participated in the inauguration with its two trouble-shooters' cars. The Superintendent of Water Distribution, when called by the Manager of the Water Supply was located in a distant section of the city "but he sounded as though he was in the same car" was the report.

An official of the Oahu Railway aand Land Company was contacted in his office by Ballard Atherton from his mobile unit along a sea shore park in the middle of the morning. Mr. Atherton, vice-president of Mutual, discussed with the official the usefulness of mobile telephone in the services of truck fleets.

In establishing mobile telephone service in Hawaii it is believed that Mutual is the first American communications company to do so outside the continental United States. To date over 30 installations have been made by Mutual and several applications are awaiting installations. It is expected that the maximum capacity of 50 to 60 subscribers on the present channel will be reached shortly, according to J. R. Veltmann, commercial manager.

The largest user of mobile units in Honolulu at present is the Hawaiian Electric Company. A major construction and dredging firm has four mobile equipped vehicles. The Gold Cross Ambulance has lost no time in advertising itself as telephone equipped. Operations in the extensive pineapple fields are already being aided by the use of two mobile units used by the California Packing Company. Taxis, doctors and private individuals comprise the remainder of mobile users in the city.

◆

Coffing "Mighty Midget" Puller Introduced at USITA Meeting

The Coffing Hoist Company, Danville, Ill., displayed publicly for the first time its new "Mighty Midget" Puller, designed to pull or lift 500 lbs. easily in spite of its highly portable handy size, at the United States Independent Telephone Association convention at the Stevens Hotel, Chicago, October 14-16.

Designed to save time and eliminate back-breaking effort of men on lifting, pulling or stretching jobs, the midget puller has a rated capacity of 500 lbs. but its chain has a tensile yield of 2,000 lbs. and its snap hooks a tensile yield of 3,000 lbs. As an added safety factor it has a "safety load" handle designed

(*Please turn to page* 106)

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"STILL IN THE LEAD"

Without Damage to Insulation—with

KEARNEY SNUB-R-GRIPS

This effective drop wire grip has amazing holding power through snubbing action, yet it does not damage the insulation. It's easy to take up or pay out slack after the grip has been installed by inching the wire through the grooved spiral. Snub-R-Grips are easily installed or removed.

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Automatically controlled, using flake calcium chloride for preventing dampness and condensation in automatic totally enclosed telephone exchanges.

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THE RATES for this department are as follows: 15c a word, cash with order, please. Box number service if desired. We Run Positions Wanted Ads for Veterans Free of Charge. For display advertisements ask for rate card. Address all correspondence to: TELEPHONE ENGINEER PUBLISHING CORPORATION, 7720 Sheridan Road, Chicago 26, Illinois.

Reconditioned Kellogg No. 2000 Type Relays

Spring Combinations

2002	2007	2023	2037	2064
2003	2019	2027	2043	2077
2004	2020	2029	2046	2089
2006	2021	2031	2048	2091

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SB	SAD	SEK	TJ	CZ	CDM
SC	SAH	SEM	TX	CAA	CDP
SE	SAP	SEQ	TY	CAB	CDX
SF	SAQ	SFU	TAV	CAJ	CEA
SH	SBG	SGF	TAY	CBE	CEB
SJ	SBH	SGH	TBL	CBM	CEC
SL	SBX	SGJ	TBN	CBY	CEQ
SN	SDE	TB	TBQ	CCC	
SP	SDF	TC	TBU	CCD	
SU	SDG	TE	CB	CCG	
SW	SDT	TF	CU	CCN	
SAC	SEB	TG	CY	CCV	

Many other codes in smaller quantities. Complete relay assemblies, mountings and covers.

BUCKEYE TELEPHONE & SUPPLY COMPANY

COLUMBUS 6, OHIO

CLASSIFIED ADS

Help Wanted

HELP WANTED: Switchmen, switchboardmen, and equipment installers by large Independent telephone company operating a large number of manual and automatic exchanges in the Middle West. Write giving age, experience, type of work and salary expected. Box No. 8525 c/o Telephone Engineer Publishing Corp.

HELP WANTED: Experienced Switchman to work on North automatic central office equipment. Box No. 8528 c/o Telephone Engineer Publishing Corp.

HELP WANTED: Man to rebuild small switchboards. Steady employment, good wages. Telephone Repair & Supply Co., 1760 Lunt Ave., Chicago 26, Ill.

HELP WANTED: Man experienced in maintaining telephone relay equipment, permanent position, housing available. Write Mr. Harrison, Apt. C-6-2, Baldwin Manor, Aberdeen, Maryland.

HELP WANTED: Lineman needed by large Ohio Independent. Good steady position. Box No. 8517.

HELP WANTED: Equipment man qualified to install and maintain P.B.X. and P.A.B.X. equipment. Rate $1.75 per hour. Permanent employment. Write Box No. 8526 c/o Telephone Engineer Publishing Corp.

USE
TELEPHONE ENGINEER AND MANAGEMENT'S CLEARING HOUSE
To locate workers—jobs—merchandise. A small ad covers the field.

HELP WANTED: 2 combination men wanted for installing telephone and clearing drop line and instrument trouble, by large Class-A Co. in Ohio. Permanent position for right men. Box No. 8516.

HELP WANTED: Cableman capable of handling construction and shooting trouble. Box 8529 c/o Telephone Engineer Publishing Corp.

WANTED: Representatives—qualified for "STANDARD ART CODE", good Commission. Write—Rachel Harriet Stotts, Box-371. Chariton, Iowa.

WANTED: Accountant preferably one with telephone experience to take charge of accounts for system having approximately 25,000 telephone subscribers, gross revenue approximately $1,500,000. Must be experienced. Location Southern California. Write P.O. Box 8519 c/o Telephone Engineer.

WANTED: Young graduate engineer, trained and having some experience in telephony. Location California and West Coast. Write P.O. Box 8518 c/o Telephone Engineer.

Position Wanted

POSITION WANTED: Sales Engineer for leading manufacturer on anything in the telephone line. Experience with the Engineering & Construction Depts. for the Bell System & Army Signal Corps. Education 3 yrs. college. Presently employed selling complete line of electrical appliances. Will consider any location in U. S. Married, 2 children, age 26. Best References. Write Box No. 8527 c/o Telephone Engineer Publishing Corp.

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POSITION WANTED: Can you use a TELEPHONE PIONEER? 25 YEARS EXPERIENCE. Basically a Telephone Engineer with plant, operation and management experiences. Know manufacturing and rates engineer, installation and maintenance of magneto common battery and dial equipment. Age 45. Will go anywhere available, anytime. P.O. Box 4370 Sta. B. Kansas City, Mo.

For Sale

FOR SALE: Telephone plant. Over 300 Telephones with Toll Line to Alsea 20 miles. Also another Toll Line to Kings Valley, 15 miles. Good 7 room house under same roof with office. Corner lot 71′ x 110′. Small rental property on same lot. Reason for selling, too old to handle. Call or write C. J. Langdon, Philomath Telephone Co., Philomath, Oregon.

FOR SALE: Magneto Exchange southwest Iowa, over 300 stations, good rates and income. Box No. 8520 c/o Telephone Engineer.

FOR SALE: 350 W. E. Desk Sets complete with receivers, transmitters and cords, $2.50 ea. 150 W. E. No. 295 common battery sub sets, complete, $1.25 ea. 175 W. E. No. 534 sub sets complete, $2.00 ea. Box No. 8530 c/o Telephone Engineer.

For Sale

FOR SALE: Telephone Company. Exchanges at Egeland, and Rock Lake, N. Dakota, also all rural lines out of Cando, N. Dakota. Good paying toll line. Over 300 telephones in service, gross income last year $12,528. Will sell for $19,000. Have new 1947 Ford pickup, and a great deal of material and tools. Richest spot in Dakota, but stockholders voted to sell and turn the company over to other hands. Towner County Telephone Co., Cando, North Dakota.

FOR SALE: Telephone Exchange in Coal Field of West Virginia. 250 telephones, gross annual revenue $18,000. If interested, write Oak Hill, W. Va. Box 173.

FOR SALE: Telephone property in the Red River Valley composed of two exchanges, 500 telephones, magneto. Manager and owner ill, must retire. Twin Valley Ulen Telephone Co., Twin Valley, Minn.

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WANTED: In market for used good condition Kellogg Common Battery Switchboard or Western Electric Company C. B. board. Advise what you have. Box No. 8522 c/o Telephone Engineer.

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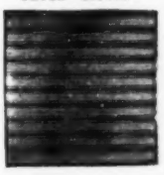
packed in cartons

CABLE-SPLICERS WIPING CLOTHS

Wipe Perfect Joints

on lead-sheathed cable splices

catch cloths



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Streamline Telephone Numbers
Permits by—Rachel Harriet Stotts,
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Use AMCON AMERICAN TELEPHONE
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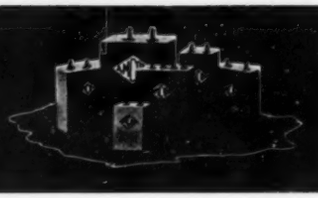

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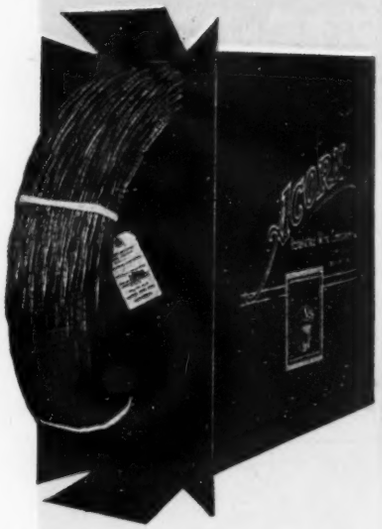
TODAY TELEPHONE WIRE has to be tough

Many years of specialization in the manufacture of communication wire has built a performance record for Acorn Drop Wire.



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225 King Street, Brooklyn, N. Y.
LEICH SALES CORP., 427 W. Randolph St., Chicago
LINDSAY SUPPLY CO., 4815 Superior Ave., Cleveland

ACORN'S exclusive Carton packaging preserves carefully developed QUALITY until installed . . .

Drop Wire—Bridle—Interior—Tree—Ground—Switchboard—Pothead—Cable Terminal—Instrument—Fixture—Buried Wire

THE BEST EYES IN THE WORLD THE BEST GLASSES EVER MADE

. . . are not good enough to detect tension and sag to TODAY'S standards!

Be CERTAIN with a Dillon DYNAMOMETER

Quickly gives you exact readings. Takes out all guessing. SAVES TIME. Saves maintenance. Up-to-the-minute telephone men are using Dillon Dynamometers for guys, conductor, strand or high tension wire. Large easily read figures in pounds, instantly read. No charts. No figuring. Compact, easily carried. Nine capacities for 500 to 20,000 lbs., all same size.

Weight: 8 lbs., 4 oz. Size 8¼" x 6¼" x 3". Not injured by overload. Strong construction cased for all weathers

Wire, write or phone for illustrated folder with full details

W. C. DILLON & CO. Inc.
5424 W. Harrison St., Chicago, Ill.

to bend at about 800 lbs., a level well below the yielding point of any other part of the puller.

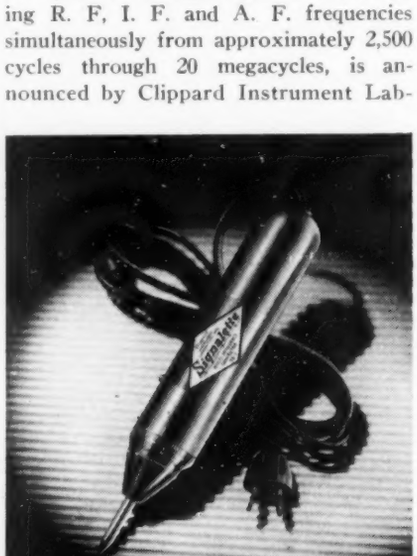
Weighing a mere 6½ lbs. (with chain), this midget puller features a two-way handle that can be used as a high speed crank or a ratchet lever.

The Midget Puller requires only 28 lbs. of effort to result in a 500-lb. pull. For information on this tool write the Coffing Hoist Co., Danville, Ill., for Bulletin MP-1.

◆

Pocket-Sized Signal Generator For Radio Servicing

A pocket-size signal generator producing R. F, I. F. and A. F. frequencies simultaneously from approximately 2,500 cycles through 20 megacycles, is announced by Clippard Instrument Laboratory, Inc., 1125-33 Bank Street, Cincinnati, Ohio. The new instrument, known as The Clippard "Signalette", is said to perform all the necessary functions of large, high-priced generators and to speed up radio servicing routines.



New, pocket-sized signal generator

Working either on 110 volts AC or DC, the Signalette has a fundamental frequency of approximately 2500 cycles modulated by 60 cycle supply when used on AC line; the modulation is not present when used on DC supply.

◆

New Telephone Secretary Amplifies Conversation

A robot telephone secretary, which receives telephone calls and brings forth the caller's voice loudly enough for a room full of people to hear, was recently announced by Assen Jordanoff, president of the Jordanoff Corporation of New York. Mr. Jordanoff developed the idea to enable him to listen to a telephone conversation while he was busy with both hands.

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Drill Holes the KM Way

ANNOUNCING SLIP CLUTCH for all our motors

• Reach across or down in ditches • over fences •

Large motors and drill held by 50 lb. torque arm suspended from boom on any truck. One man operated this way.

No extra truck—No extra driver.

Drill holes from 3" to 16" in diameter and depths from 1 ft. to 40 ft. Motors from 12 to 91 lbs.

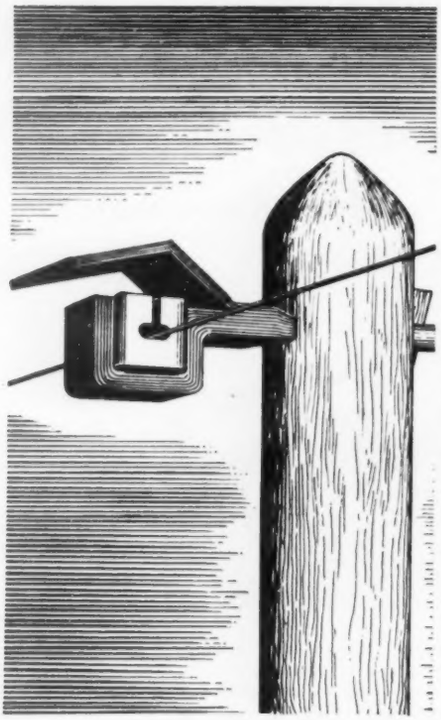
Run screw anchors in earth anchor holes from your poles. Motor and drill held by hand for small pole sizes. Drill at any angle. Not an old fashioned auger.

Drill under streets . . . under trees . . . under railroads . . . for cable, water, gas or sewers.

Write your supplier or to

KA-MO TOOLS, Inc.
2117 SOUTH TROY STREET
CHICAGO 23, ILLINOIS

PROGRESS IN INSULATORS 5.



★ 1847 ★

Glass block insulator in iron frame

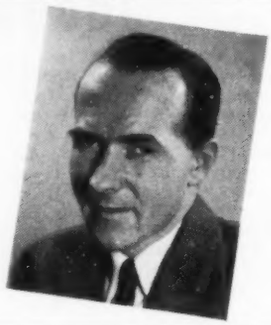
ANOTHER variety of the glass block insulator was mounted in an iron frame before attaching to the pole. Again a small roof served as a rain shed.

Especially designed for hilly country, where the line is often not at right angles to the pin, is the Hemingray insulator shown. A top groove accommodates the wire. Groove below is for the tie.

Write for the complete historical outline of insulator development.

HEMINGRAY INSULATORS
Owens-Illinois Glass Company
Hemingray Division, Muncie, Ind.

THE BACK OF THE BOOK



By JOHN G. REYNOLDS
Managing Editor

WORTH THINKING ABOUT . . .

NOBODY FEELS very sorry for the fellow who makes $50,000 a year and has to pay half of it to the government. That's a lot of dough, but it looks like he could live pretty well on what he has left.

As a matter of fact, there aren't many people in this country making that kind of money. And how much a high income man has left to spend doesn't make much difference to most of us personally.

But what is a cause of our worry—every American's worry—is that the highly paid boss might not be able to spend some of his money for the tools and machines we need on our jobs.

What if he finds he hasn't enough left over, after he pays his taxes, to invest in job-making businesses?

What if he decides that he isn't going to take a chance on some new product or new business because by the time Uncle Sam gets through with him, the returns are too small to be worth it?

Where are the jobs coming from tomorrow—when machines wear out—when the children grow up and look for work?

These things are worth thinking about now, whenever someone says: "Let's soak the rich!"

• • •

COURTESY'S VALUE . . .

IT IS surprising what courtesy will do for an organization and its people when sincerely and constantly practiced! Courtesy has a carry-over value that extends way beyond immediate reactions.

An eastern company operating four different services—gas, electricity, water and telephone—recently made a survey of its standing with the public it served. One of its companies was found to enjoy a public esteem far exceeding that of the other three. The courteous manner in which its personnel had treated people had given it a fine reputation, whereas one of the other companies was bitterly criticized because of the discourteous attitude of its people.

But the significant thing was the influence that courtesy and the lack of it had had on the thinking of the patrons of the two companies. Only 19 per cent of customers of the favored company felt that its rates were high and only 14 per cent were disposed to question the accuracy of its statements. Forty-three per cent considered the company active in promoting civic welfare.

In the case of the company that lacked courtesy, 47 per cent declared its rates too high and 40 per cent were sure its meter readings were dishonest or faulty. Only three per cent were of the opinion that that company was doing anything for the community.

There is a good lesson in the survey: Just cultivate and practice well-mannered efficiency in dealing with customers and let the courtesy ripples spread their amazing influence. You have nothing to lose—and everything to gain.

• • •

SNOW STORM SPECIAL . . .

OUR GOOD friend, the Alberta Government Telephone Company, Edmonton, Alberta, records a story of Canada's snows, that makes us realize that a Chicago winter is not so bad.

In one Canadian storm, a snow slide came, bringing trees and rocks with it, taking out the working line between three poles and the wire out on to the lake. The snowslide also caught five cars stalled at the point of the line damage. When the bulldozer started to clear the road, he did not know there were cars buried under the snow and was surprised when he just skimmed the side of a car and exposed it. In fact, if he had been another foot south he would have cut the car in two!

However, through all the snow and debris coming down with the snowslide, one pole stood buried in snow except for the crossarm and about two feet of the pole.

SHERRON
ACOUSTIC
STAINLESS STEEL TELEPHONE BOOTH

GLISTENING STAINLESS STEEL

It Attracts Traffic

Welcoming brightness is the major motif of today's interiors. Stores, public and office buildings, hotels . . . all are brilliantly illuminated and decorated to reflect light . . .

Modern in design, the Sherron Acoustic Stainless Steel Telephone Booth is in tune with the trend to brightness. It's a real traffic attraction.

Here is the one telephone booth you can count on for continuous flow of pay station patronage.

MORE REASONS WHY THE SHERRON ACOUSTICS STEEL TELEPHONE BOOTH IS TOPS:

- *All-metal rigid construction*
- *Improved door hinges prevent creaking or sticking. Door operates easily and quietly in stainless steel track*
- *Automatic, noiseless door switch controls ceiling light of special design, eliminating current consumption when not in use*
- *Linoleum covered steel floor prevents wear on floor of owner's premises*
- *Adjustable shelf and instrument backboard*
- *Electric ventilating unit of improved type*
- *Steel seat of new design*
- *High grade baked enamel finishes*

SHERRON METALLIC CORPORATION

1201 FLUSHING AVENUE • BROOKLYN 6 • NEW YORK

Orders Are Rolling In!

WE ARE PROUD OF OUR LATEST ORDER:

Size: 4000 line exchange

Type: McBerty "All Relay"

With: Automatic Toll Board and the usual accessories.

This is one of many orders we have for large exchanges — evidence of the increasing employment of the "All-Relay" principle in offices of considerable size.

From the smallest Community Dial Office, to the largest Metropolitan Network, there is a North exchange, built for enduring, economical service.

THE NORTH ELECTRIC MFG. COMPANY

Galion, Ohio